AWIPS Release 4.3.3 Release Notes

Section I - New Functionality in Release 4.3.3

1.0 D2D/TEXT/OTHER APPLICATIONS

1.1 Radar Products

! AWIPS will receive some additional radar products over the SBN. Some of these products are paired products when received from dedicated/associated radar sites. However, these products will not be paired when received via the SBN. A paired products is image/graphic plus accompanying text.

1.1 WarnGen

! The default PIL for warning products that is placed in the "Header Block" on the text workstation has been modified.

In AWIPS releases up to and including R4.3.1, when a forecaster clicks on the "Create Text" button in Warngen on the D2D, the "Header Block" window on the Text Workstation pops up with a header of CCCWRKWGx, where "x" is the workstation number where the warning is being created. In these older AWIPS versions, before the warning is sent, the forecaster has to manually change this PIL to the "live" product PIL, e.g. MIASVRTBW. As many sites have pointed out, this introduces an unnecessary opportunity for forecasters to make an error. Well over 200 warnings have been sent out with improper PILs in the past few months because of this functionality.

Now, instead of defaulting to a PIL of CCCWRKWGx, the PIL in the "Header Block" for Warngen products is taken from the CCCNNNXXX in a site's appropriate Warngen template. In other words, when the "Create Text" button is clicked in R4.3.3 Warngen, the software will go into the appropriate Warngen template, look at the CCCNNNXXX that the site has in there, and insert that PIL automatically into the "Header Block". Sites have the flexibility to include either the real PIL (e.g. MIASVRTBW) or a WRK PIL (e.g. MIAWRKSVR) in their Warngen templates, although the real PIL is recommended to prevent these typographical errors.

(It is also important to note that, even though the default PIL is no longer CCCWRKWGx, the text workstation will still also save another version of the warning product with the WRKWGx PIL; this will allow a site to call up the product at another workstation should the original workstation fail for some reason.)

Another related piece of new warning product functionality deals with the "Save" and "Send" buttons. When a forecaster tries to save a product with a real PIL (e.g. MIATORTBW), once the "Save" button is clicked, the software will ask something like, "You are about to save a product of type CCCNNNXXX. This will only store locally, but it may affect triggers." The user must then choose to save the product or abort the save. This reduces the chance that a forecaster will save a product with text trigger implications When clicking on "Send", the

software will pop-up a confirm message similar to, “You are about to send a CCCNNNXXX warning!” The forecaster can then send the warning or abort.

2.0 SYSTEM

2.1 Ingest Restart

Refer to System Manager's Manual Section 4.8

! The Ingest Restart GUI allows the user to restart a select set of AWIPS processes. For Release 4.3.3, a limited set of processes can be restarted. This includes:

- ! Asynchronous Product Scheduler (asyncScheduler)
- ! Individual processes for each dedicated radar (the wfoApi process for the radar)
- ! The AWIPS software for board 0 (zero) of the Simpact. This executes icpReset0, which resets both syncComms and wfoApi for all dedicated radars on that board.
- ! The AWIPS software for board 1 (one) of the Simpact. This executes icpReset1, which resets both syncComms and wfoApi for all dedicated radars on that board (if applicable) as well as the dial ports.
- ! Dial Radar processes - both the DialServer for one-time requests and the RMR_Server for multiple requests

2.2 Radar Products

Refer to User’s Manual Section 7.2

! All products formerly collected by the NIDS vendors, along with Archive Level III products, and other products identified for national collection will now be distributed to the NCF via the AWIPS WAN as part of a national set of products.

! Radar Product Selection (RPS) lists will now be combined with a national set of products. The combined list will include the national set of products first followed by the site’s RPS list. The two lists will be compared and duplicates will be dropped. Since the number of products AWIPS can receive is limited, some of the site's RPS list may be truncated. The national set will vary by the communication line type to the radar (56 Kbps, 33.6 Kbps, or 14.4 Kbps) and by the radar’s operational mode (clear-air or storm).

! The combined national set of products and the site’s RPS list will be sent to the radar either when a General Status Message (GSM) is received from the radar indicating a mode change, or in response to a new RPS list being sent by the forecaster from the RPS list editor window.

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Section II - Discrepancy Report Fixes in Release 4.3.3

Section II - Fixes in Release 4.3.3

The following DRs have been fixed for AWIPS Release 4.3.3.
They are fixes to problems opened prior to R4.3.3 testing.

1.0 D2D/TEXT/OTHER APPLICATIONS

1.1 Hourly Weather Roundup (HWR)

Refer to User's Manual Section 8.2

! The HWR NWR application no longer aborts when certain threshold phrases are encountered in the default format. (DR 5409)

! The HWR application increments two characters for each weather type. Previously, it would increment one character and insert additional incorrect weather types into reports. (DR 5416)

1.2 Surface

Refer to User's Manual Section 2.1.6

! The Lightening Graphics product has been removed from the NCEP section of the Surface menu because AWC no longer produces it. (DR 5588)

2.0 INTERACTIVE FORECAST PREPARATION SYSTEM (IFPS)

2.1 IFPS Other

! The site IDs in Gform are no longer obscured by vertical lines. (DR 5176)

! Station matrix identifiers above the individual matrices within IGR (station mode) are no longer garbled. (DR 5444)

! A problem which caused several of the ICWF applications to corrupt station data after the first station has been corrected. The affected applications are IGR, Gform, avn_editor, and IUR. (DR 5491)

! The georemap application no longer crashes when using "Save Only". (DR 5597)

! The TSFP 12Z product header now has the proper date. Previously, the 12Z TSFP product referred to the current day instead of the data that the forecast data were valid. (DR 5913)

2.2 IFPS Watch Warning Advisory (WWA)

! The wafd and wwainj applications will include WWAs if Active & Unissued hazards are included in the AFD and ZFP products, while only Active and Issued hazards are included in the SAF product. (DR 5294)

! IFPS no longer has a product purge time error around the end of the month. Previously, if the product expiration time was in the current month and the default expiration time was in the next month, the default expiration time would be used. (DR 5616)

3.0 HYDROLOGY

3.1 HydroBase

Refer to User's Manual Section 12.1.1

! The following changes were made in HydroBase: (DR 5381)

- < Users may now enter negative values for a station's elevation in the Location window.
- < The HydroBase E-19A paper report was modified so that it cannot spill over onto a second page.
- < The ability to e-mail HydroBase reports has been disabled.
- < The HydroBase Areal Definitions window was modified to allow user to delete individual basins, counties, or zones.

3.2 HydroView

Refer to User's Manual Section 12.1.2

! The following changes were made in HydroView: (DR 5380)

- < The Product Viewer display in HydroView now shows all times in UTC. Previously, some times being shown in local time.
- < The BASEDIR command in the shef_issue script was fixed. It did not work for some AWIPS implementations.

3.3 National Weather Service River Forecast System (NWSRFS)

! NWSRFS has been updated from version 15.1 to Version 16.0, which includes (DR 5383):

- < The FLDWAV operation has added the blend tide and blend time series capabilities.
- < The FLDWAV operation will now produce the output needed to run the fldgrf application

- < The RES-SNGL operation has new option to allow reservoir to be operated based on the rate of rise of the pool elevation.
- < Several changes to the shefpars program.
- < New IFP capability to generate and handle range mods.

3.4 RiverPro

Refer to User's Manual Section 12.1.3

! The following RiverPro changes were made in RiverPro: (DR 5306)

- < Precipitation values of 0.01 are correctly formatted and are no longer formatted and stored as Trace (T) values.
- < Data extraction capability has been extended to forecast data and contingency data.
- < River height values may be adjusted by subtracting the river gage zero datum value during data extraction.
- < Users may ask for flow derived from stage and stage derived from flow during data extraction.
- < RiverPro may issue products in test mode.
- < When extracting data for products, RiverPro automatically searches through the user-defined rank-ordered SHEF type-sources available for a particular station-data type combination (user-defined rank-order done in HydroBase).
- < Users may now choose to automatically include multiple impact statements. Formerly, only one "best" impact statement could be chosen.
- < A new text formatting capability for forced carriage returns has been added.
- < There is a new Graphical User Interface support for viewing/setting the CRS message broadcast periodicity.
- < The script for posting CRS messages on a remote WFO has been changed to fix a typographical error in a tail command.

3.5 Stage 3

! The auto_stageiii application has been changed to correct a problem generating GIF images which contain precipitation. Also the precipitation scale was changed to match the Stage 3 GUI precipitation scale. (DR 5384)

3.6 Weather Forecast Office Hydrologic Forecast System (WHFS)

! The OH metar2shef translator to decodes the T Group Properly. This group contains the temperature and dew point to the tenths of degree Celsius. Previously, this group was not decoded, and the translator used the temperature/dewpoint field shown in whole degrees Celsius appearing earlier in the message. (DR 5382)

! Lock mode set to row on all dynamic tables purged by the db_purge program. This is required by the NEW db_purge program (refer to Section F on web site

http://www.nws.noaa.gov/oh/hod_whfs/documentation/bld43xrn.htm) that is delivered with AWIPS R4.3.3 which requires row level locking to perform correctly. (DR 5540)

Delivered a newly designed Hydro Informix database purge program. The main features/advantages of it are:

< Only needs to be run once per day at any site (WFOs and RFCs).
< Deletes single records at a time instead of all old records in a table.
< Eliminates "long transaction" Informix errors.
< Allows the SHEF Decoder to run concurrently (i.e., never turn it off).
< Eliminates risk of collisions with other Hydro applications.
< User may reset data retention periods without risk of "long transaction" errors.
< Allows the possibility to miss one to several purge cycles without harm. Just run the next cycle and expect the job to take longer but to work properly.
< Expect the once daily purge to take some time (15-20 minutes at a WFO and up to 2 hours at a large RFC) but without contention problems.

The "oper" user crontab that runs on the ds1 machine, whfs_crontab_ds1, was modified to run the db_purge program only once per day at 07:45 GMT. This new crontab will be installed at WFOs. RFCs should modify their custom "oper" crontabs accordingly to only run the db_purge once per day at a slow time.

! The DPA decoder is no longer has an intermittent problem reading some DPA product headers. Previously, the DPA product was still decoded but the subsequent step of creating accumulated DPA grids for 3, 6, 12, and 24 hours failed to occur. This failure prevented the Summary FFMP Threat text dialog in WHFS HydroView to work. (DR 5627)

! DPA products with time stamps a few minutes before the top of the hour are now processed by the Stage 2 and Stage 3 software. (DR 5865).

4.0 LOCAL DATA ACQUISITION AND DISSEMINATION (LDAD)

Refer to User's Manual Section 9

4.1 LDAD Configuration/System

! LDAD /var/opt/ns-fasttrack/logs/httpd-default logs are now being purged on ls1. (DR 5349)

4.2 LDAD Fax

! Only one user at a time can be editing the fax site list. When a user edits the list, a faxLock file is created. If the user exits the autofax configuration application, the faxLock file is not removed and the next user cannot launch the autofax configuration application. To recover,

the user will need to relaunch the application on the same workstation and exit using the menus, or, remove the faxLock file from $FXA_DATA/workFiles/fax. However, the software was designed with this limitation. (DR 3808)

5.0 SYSTEM

5.1 Asynchronous Product Scheduler (APS)

! APS strips off all the ZCZC/NNN header/trailer sequences from products it sends over the WAN. Previously, APS incorrectly left the last N. (DR 5354)

! APS now sends products to DEFAULTNCF through distributeProduct with a code of 4. Previously, products were sent with a default code of 0, which indicates that nothing is to be done with the product. During a recent SBN outage, this resulted in some high priority products not being received by sites. (DR 5527)

! APS no longer has garbled data, mixed up products, or truncated products. Previously, these problems would occur intermittently when some memory was prematurely released. (DR 5560)

! APS no longer has a problem when the aps_line.tbl has an erroneous space or if exactly 2 communication lines are specified. (DR 5561)

! APS writes MHS product ID to its regular log. Previously, when APS used distributeProduct to send products over the WAN, it wrote the MHS product ID to standard out. (DR 5648)

! APS will now distribute products with 7 or 8 character PILs to the designated ports. (DR 5904)

5.2 NOAA Weather Wire Service (NWWS)

! Shutting down the NWWSSchedule process in mid-transmit no longer temporarily suspends NWWS product transmission. Previously, if the NWWSSchedule process was shut down while processing the transmission of an NWWS-bound product, the NWWS port(s) remained closed until the NWWSTransmit process(es) (children of NWWSSchedule) exited and freed up the ports. If the user attempted to restart NWWSSchedule before the NWWSTransmit processes were gone, NWWSSchedule said it could not access the ports and terminated. The process sometimes ended up being down for some time, resulting in loss of data. (DR 5200)

! An ETX character has been added to the end of all NWWS messages. Previously, stage agencies, customers, and user's applications would fail without this character at the end of the message. (DR 5334)

5.3 Product/Process/System Monitoring

Refer to User's Manual Section 11

! The Netscape Redbook Graphics status is no longer misleading. Previously, it keyed off the NCEP lightening graphics product. Since this product did not come in when there was no lightening, the Netscape Monitor would incorrectly indicate that Redbook Graphics were down. The Netscape Monitor now keys off of Weather Depiction. (DR 4026)

5.4 Radar System/Radar Archiving

! When viewing radar composites with D2D's Three Pane Layout, the workstations's response time is no longer slow due to the X server topping out CPU usage. (DR 1680) **Refer to User's Manual Section 2.1.6**

! The Radar DialOut line sometimes disconnects when running the RMR Application. The Radar Multiple Request functionality is causing the dial-out modem to sometimes hang with 'Problem with Freeway - disconnecting' message. The operator must reseat the dial-out modem to restore the functionality. The line may hang less often by modifying the rate in the fw1000_pv6.setup file to 9600. However, the software was designed with this limitation. (DR 4641) **Refer to User's Manual Section 7.4**

! The purge parameters for WFO and RFC radar data are now different to meet the requirement that WFOs retain 3 hours of data, and RFCs retain 6 hours of data. (DR 5506)

! A typographical error in prodList.txt file has been corrected. "47 0 NWP SUDS6" now reads "47 0 NWP SDUS6". (DR 6069)

5.5 System Process/Log

! WNAR (Aviation Weather Center) Text Browser no longer has a problem bringing up data for KMKC. The products are stored under nodes TOP or STL. (DR 3376) **Refer to User's Manual Section 4.2.5**

! Log messages from distributeProduct are no longer written to the as1swap log when it is called from the APS. (DR 5593)

! The msg log library routine no longer sometimes leaves file descriptors open at rollover. If unchecked, this could have resulted in failures if MHS ran long enough. (DR 5737)

5.6 UNIX and Informix (dbaccess) Commands

! Dates on the footer of man pages are now correct. Previously, a Y2K problem caused decompressed man pages to display dates in year formats <month> <day> "19" <two digit year>. (DR 3527)

5.7 Wide Area Network (WAN) Communication/Message Handling

! The message acknowledgment flag will now work for addressees that had not previously worked such as DEFAULT or a distribution list such as NWWSUP. (DR 5232)

! Binary files may now be transmitted over the WAN. This will facilitate transmission of gridded binary QPF files. (DR 5371)

! Dummy (empty or non-existent) files sent with attachments to the NCF will be discarded. This change was made to allow binary files to be transmitted as attachments without potentially confusing the decoders with two files sent with a single communications header. (DR 5390)

6.0 DATA

6.1 Site Specific Data

! When a warning is generated on EYW, the NWS station name, "Key West Florida", is omitted from both the product header and the first line of the warning text. Also, on D2D, there does appear to be hatching in the warned area, although there is a "W" for only Monroe County. However, this is how the software was designed to operate. (DR 4433) **Refer to User's Manual Section 5.3**

7.0 OCONUS

7.1 Text Products

Refer to User's Manual Section 4.2

! OCONUS METAR and TAF 3-character IDs are incorrect. The 4-character location identifiers of the METAR and TAF bulletins are converted into 3-character identifiers by stripping off the first of the four letters and using the remaining characters as the 3-character ID of the XXX in the AFOS PIL. The software was designed with this limitation. (DR 4420)

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Section III - Current Problems to be Fixed in a Future Release

NOTE - Problems and cooresponding workarounds added to this section since version R4.3.1 are designated by the following:

Problem: . . .

1.0 D2D/TEXT/OTHER APPLICATIONS

1.1 AWIPS Verification Program (AVP)

Refer to User's Manual Section 8.4

! **Problem:** If the Verification editor is left open, fields can be edited even after the cccVERxxx message is formatted. (DR 5202)
If the Verification Editor is left open over a period of time when one or more messages are formatted and transmitted (around 1130 and 2330Z), the formatted and transmitted runs will still be editable. The Verification Editor window does not update to indicate the change in status of the runs from U to F or T. It is possible that users may think they are editing values that the cccVERxxx message recipients will get when they are really not.

Workaround: Close the Verification Editor and reopen it if it has been open over the period of time when the formatting and transmitting of messages occurs (around 1130Z and 2330Z).

! **Problem:** The Last Obs Ceiling and Visibility values are editable for Snow Only and Public Stations. (DR 5203)
Stations set up in the Verification application as Public and Snow Only Have "NA" in the rows for Ceiling and Visibility except the first field, Last Obs. The Last Obs field is editable, but the others in the row are not. For Snow Only stations, these fields are "MSNG". When trying to edit and save these values for Snow Only stations, an error message pops up, "VerScreen::write(): saved failed, status = 2011". Clicking OK and changing the values back to "MSNG" allows the user to continue. For Public stations, the application ingests values for the Last Obs fields. They can be edited as desired. The values are formatted into the cccVERxxx messages sent to NCEP.

Workaround: Edit both the Last Obs fields to "MSNG", and no extra data will appear in the formatted messages.

! **Problem:** The Verification Editor does not check between different parameters for valid observation values. (DR 5205)
The Verification Editor allows the user to save combinations of meteorological parameter values that are not allowed in observations. You can save the following combinations that are not allowed in observations: A definite Ceiling with a Cloud Amount of "CLR" or "SCT", a Wind Spd > 6 Knots with "VRBL" Wind Dir, a Wind Spd > 0 with a Wind Dir "0", 12-Hr Snow > 0 with POP/(in) = "0.00", and Obs6h Wind Spd (greatest in a six hour time window) < Obs Wind Spd.

Workaround: Users should check to make sure the values they are editing are correct.

! **Problem:** AWIPS Verification Program (AVP) fails on Leap Year. (DR 5325)

The AVP fails to launch on 2/29 (leap yr). The forecast cycles on the 29th appear to be missing because the Metar decoding process fails for hourly cycles on that date. The AVP will be unavailable for 5 days (10 cycles) until AVP no longer attempts to read the missing data on the 29th.

Workaround: None. This problem is expected to be fixed before the next leap year occurs.

1.2 Climate

Refer to User's Manual Section 8.3

! **Problem:** Font errors appear for all the Climate GUIs when the applications begin. (DR 3131)
Sometimes the fonts appearing on a particular Climate GUI will not be the ones normally seen on the GUI, e.g. a smaller font size may appear when the GUI is opened on a particular workstation. This different font does not affect functionality, i.e. all menu choices and buttons will still be available, but it may make it more difficult to use the window.

Workaround: Program functionality is unaffected. To fix the problem, try specifying the font within the GUI properties. The user may need to scroll or tab through the window to see all the information present.

! **Problem:** Could not run Climate successfully on text ws for a short time. (DR 4724)
This morning I was unable to run Climate on xt2-tbw4 for a couple of hours. I was able to run on the ds, and now the problem has gone. Dave Miller reports seeing this once before at TDL, and the problem disappeared there similarly.

Workaround: The problem has occurred only two known times during testing and is unreproducible. The problem went away after a short period of time and didn't reoccur. Logging out and logging back in or rebooting the terminal may solve the problem if it ever occurs again. Also, you may try to run the application from the ds and sending the display to the workstation.

! **Problem:** The 6th character in the WMO header is being cutoff for climate products. (DR 5115)
In non-commissioned mode, when a climate product is created to be sent over the NWWS, the WMO header for the product in the msgreq.log for WAN transmission. appears as 'CSUS9', when it should be 'CSUS97'. This occurs for sites whose climate product header in commissioned mode is only 5 characters.

Workaround: This has no operational impact. In commissioned mode, the product will be transmitted successfully to the NWWS and the NCF using the full commissioned version of the WMO header, whether that header has 5 or 6 characters. In non-commissioned mode, if the product is sent with the '7' cut off, i.e. as CSUS9, the product still goes to the NWWS and

AFOS successfully, and the copy of the product that is sent to the NCF will get dropped at the Gateway as an invalid product.

! **Problem:** Site needs ability to modify header on climate NWR product. (DR 5268)
At RNK, they need the climate NWR product header to read 'WBCCLIXXX', whereas at present it reads 'RNKCLIXXX'. If the header is incorrect, the product will not be read by the NWR machine.

Workaround: Modify the header in the NWR Browser.

! **Problem:** The Climate application may have rounding errors in the wind fields. (DR 5781)
Conversions between miles per hour and knots may have rounding errors because the database tables have wind as an integer.

Workaround: Manually edit the products with the wind speeds in the correct miles per hour. Also, a software fix is available via a patch.

1.3 Color Curve/Image Combination

Refer to User's Manual Section 2.3

! **Problem:** User-created color curve becomes distorted when combining images.
(DR 1298)
Create a new color curve, one that shades the freezing line on surface temperature for example. If that image is then combined with another image, the newly created curve will become distorted, i.e., the shaded region that before the combination highlighted the freezing line is now shading a different and larger range of temperature on the part of the combined image. This is due to the 4-bit + 4-bit image combination algorithm.

Workaround: None.

! **Problem:** The toggling of a combined image doesn't always work properly. (DR 2677)

Workaround: Click on the legend several times, until it works properly again.

! **Problem:** Changing the color curve in one panel of a 4-panel image corrupts the panel. (DR 4491)
If you change the color curve of an image product in one panel of a 4-panel image product, that panel will become temporarily corrupted. The panel will show the new color curve in some frames of the loop, but other frames will show an all white or black pane, or perhaps the previous product that was in the large pane in general as if that one pane of the 4-panel had crashed. The other 3 panes of the 4-panel will be unaffected and will remain as loaded. The

problem is repeatable with 4-panel radar and gridded data image products, but has not been duplicated with 4-panel satellite.

Workaround: Choose the 'Load to this panel' option on any of the other 3 panes of the 4-panel. The first panel will 'fix' itself, and all frames of the loop will show the new color curve in that first pane. All subsequent attempts to change color curves in any of the 4 panes will now be successful.

! **Problem:** Image Color Editor malfunctions. (DR 4944)
When editing satellite image color curves, a problem occurs occasionally.
First, you edit a given range of values on the color curve with colors A through B. Then, you then try to edit a new range of values with colors X through Y. For the second edits, colors A through B are applied erroneously.

Workaround: Click Undo and retry the edit of the second set of colors.

! **Problem:** Edited Color Curves change when other products are overlaid if color curves are not saved first. (DR 5172)
The problem exists when loading grid data as an image and editing the color curve in the Image Colors Editor before loading another product. When the other product is loaded from the Volume Browser or D2D menu, the colors of the first product that were edited in the Image Colors Editor are automatically changed to different colors than requested. This is true when the edited color curve is not saved before loading another product. The problem also exists if a gridded data image and another product are loaded together. If both products are loaded, the color curve for the image is edited in the Image Colors Editor, and then the non-image product is deleted from the large pane, the edited colors automatically change to non-specified colors.

Workaround: Create the color curve for the gridded image product and save it. Then load the second product.

1.4 Crash/Hang/Restart

! **Problem:** Workstations exit to login screen at times. (DR 4507)
On rare occasions, a workstation has spontaneously exited out to the login screen for no apparent reason. The cause of this occurrence is under investigation, but is still unknown.

Workaround: None.

! **Problem:** Loading cross sections of Geo Vort crash the large pane. (DR 5108)
Loading cross sections of Geostrophic Vorticity from the Volume Browser at any scale with any model crashes the large pane.

Workaround: None. The pane does restart successfully. This product is new for 4.3.

1.5 Exiting D2D

! **Problem:** D2D cannot be closed while it is iconified. (DR 1543)
If the D2D has been iconified, clicking the first mouse button and selecting 'Close' from the menu will not close the D2D.

Workaround: Double click on the D2D icon to restore it, and exit from the file menu.

1.6 Hourly Weather Roundup (HWR)

Refer to User's Manual Section 8.2

! **Problem:** The station name in HWR is truncated when running HWRNWR. (DR 4725)
The last station listed in the 'station format' truncates in the output by one character.

Workaround: Add an extra space or carriage return at the end of the last line.

! **Problem:** HWR: Time format displays combination of PM and UTC when UTC is selected. (DR 5152)
When the NWR or NWWS is setup to display the HWR in UTC time, the text returned is "6:00 PM UTC" instead of "1800 UTC". This is incorrect since UTC time by definition is neither AM nor PM - it runs from 0000-2359. The local time format "1:00 Eastern Standard Time" in this instance is correct.

Workaround: None. However, most sites won't notice this problem since they probably have HWR formatted to local time.

! **Problem:** HWR does not allow multiple time zones per tower. (DR 5229)
Several WFOs span two time zones. The HWR needs to be enhanced to permit two time zones in the output, such as "These are the 2 PM Eastern Standard Time or 1 PM Central Standard Time observations."

Workaround: None.

1.7 Local AWIPS MOS Product (LAMP)

Refer to User's Manual Section 2.1.6

! **Problem:** LAMP Surface Pressure and Condensation Pressure contour plots are not representative of real data. (DR 2420)
The plots of LAMP Surface Pressure and LAMP Condensation Pressure appear as a couple of 1000 mb lines and a number of lines extremely close to each other (appearing as one thick line) near one or more borders of the LAMP domain. When changing this contour plot to an

image, sampling indicates unreasonable pressure values for these plots, especially where the lines are close together.

Workaround: Ignore the LAMP analyses at the edges of the domain borders.

! **Problem:** LAMP Deformation Vector product appears strange. (DR 2422)
The LAMP Deformation Vector product appears as a small number (2 to 8 or so) of Z's within the LAMP domain.

Workaround: None. Use the Deformation Vector product with caution.

! **Problem:** LAMP Relative Humidity product shows values greater than 100%. (DR 2423)
The LAMP Relative Humidity product has values greater than 100% near the edge of the LAMP domain. This product can be found in the LAMP cascading menu in the Analysis graphics section of the Surface menu, and also in the Volume Browser in the Basic menu.

Workaround: None. This is a border problem at the edge of the LAMP domain.

! **Problem:** LAMP Terrain Dependant Products Incorrect. (DR 4206)
The LAMP terrain on tbdw (SLC) and tbw4 (PBZ) is incorrect and this causes some of the LAMP model products to be incorrect. For SLC, the terrain is 0km through most of Utah, Idaho and Arizona. There is a mountain chain rising to about 800 meters around the longitude of Nevada. For PBZ, the whole domain (the eastern 1/3 of the CONUS) is 0 km. This incorrect terrain causes some products to be incorrect. Surface pressure is 1013 mb, surface pressure advection is 0mb/hr, and surface Omega is 0 ubar/s anywhere the terrain is 0 km. The values for these products may also be incorrect where the terrain exists.

Workaround: None. Use such products with caution in mountainous areas.

! **Problem:** Some LAMP Analysis Graphics products will not load and cause tracebacks. (DR 5126)
Some LAMP Analysis Graphics Products in the Surface menu and the Volume Browser will not load, and a Red Banner message appears saying that the product can not be displayed. A traceback occurs in the log file. The products under the Analysis Graphics section of the Surface menu are: Divergence, Mixing Ratio Div, Temperature Adv (These products can also be found in the Volume Browser). The products in the Derived section of the Volume Browser are Vorticity, Rel Vorticity, Divergence, Total Deformation, Deformation Vect, Temp Adv, and Eq Pot Temp Conv.

Workaround: None. These are a few LAMP products that will not be available.

1.8 Local Analysis and Prediction System (LAPS)

Refer to User's Manual Section 2.1.6

! **Problem:** LAPS Precip Type product does not load from the Surface menu and causes a traceback. (DR 5125)
The LAPS Precip Type product will not load from the LAPS submenu of the Surface menu. A traceback occurs. From the Volume Browser, the product loads with no traceback, although there is no data to display currently.

Workaround: Load the product from the Volume Browser instead of the Surface menu.

1.9 Looping/Sampling/Zooming

Refer to User's Manual Section 2.4

! **Problem:** Straight map lines sometimes disappear when zoomed. (DR 4415)
If the user zooms in sufficiently (usually max on WFO scale), map lines may disappear. This seems to happen when neither end of a line segment is on the display.

Workaround: The map line can be made to reappear by roaming the display or zooming back out.

! **Problem:** D2D pane will trace back and hang when put home cursor is loaded after sampling is turned on. (DR 5292)
If Home or Put home cursor is selected from the Tools menu after sampling has been turned on, the D2D will hang. The IGC display log will show tracebacks with the error shown below. The IGC process will run away with CPU time.

Workaround: The only way to restore the hung pane is to kill the runaway IGC process. The Restart Dead Panes option from the Options menu does not restart the pane. It reports that all panes are operating normally. The workaround is to select the home or Put home cursor selection first, then turn on sampling. If done in this order, no problems are encountered.

1.10 Map Features/Legends

! **Problem:** The hide legends pop up feature for tools does not work correctly when there are no time varying images or overlays being displayed. (DR 2678) **Refer to User's Manual Section 2.4.1**

Workaround: Use the hide legends feature when time varying data is displayed.

! **Problem:** Marine Zone maps are missing from the Geography Watch and Warning Maps. (DR 3024) **Refer to User's Manual Section 2.1.6**

Workaround: None.

! **Problem:** Two LDAD map backgrounds are not available at RFCs. (DR 5146) **Refer to User's Manual Section 2.1.6**
Two LDAD map backgrounds - LDAD stations and LDAD precip - are listed in the Maps menu at WFOs but not RFCs. It has been suggested that RFCs may have use for these map backgrounds as well as WFOs.

Workaround: None.

1.11 NOAA Weather Radio (NWR)

Refer to User's Manual Section 8

! **Problem:** No logs appear in NWR Browser log window. (DR 2985)

Workaround: NWR logs are available in the logs directory. Location of the log file can be found in the System Manager's Manual.

! **Problem:** The NWR Browser does not indicate a failure when a send is unsuccessful. (DR 5078)
The NWR Browser does not alert the user to unsuccessful sends.

Workaround: The only indication is that the product stays in the "Delayed" area instead of moving to "Sent".

! **Problem:** transferNWR fails to determine the correct CRS master processor under certain conditions. (DR 5370)
The logic within transferNWR that determines which processor is the "master" is flawed. If the master processor is 5MP and the shadow processor is 0MP and is up and running, transferNWR will incorrectly determine that the master is 0MP and send the file to that host.

Workaround: None. This has apparently never been detected in the field, and the chances of this happening are small. In addition, OSO has developed a "transfer CRS" which is based on transferNWR but has the correct logic - this is an adequate workaround until we can fix transferNWR.

1.12 Procedures

! **Problem:** Time Height Cross Sections using procedures. (DR 5177)

If a Time Height Cross Section is generated using the volume browser and is called up again later using a procedure, it does not work correctly. If the point is moved to a different location and the procedure is re-run the Time Height Cross Section image field is for the original location, and the graphic is for the new location.
Example: A user goes to the volume browser and does a time height cross section using point A over Richmond VA. and selects Eta, Temp, and Rel Hum. (as an Image) . Next the user saves this as a procedure. The user then moves point A to Miami. When the procedure is re-run the time height cross section has the graphic field for Richmond and the image field for Miami.

Workaround: None.

! **Problem:** ColorTables vulnerable in procedures list. (DR 5463)
The list of procedures to open includes colorTables, which of course is not a procedure, but the directory in which user-defined color tables are stored. If one tries to open same, an error dialog is displayed and the personal color tables file is deleted. The list of procedures should not include colorTables.

Workaround: None. Take care not to select colorTables from the procedures list.

1.13 Product Maker

Refer to User's Manual Section 3.2

! **Problem:** The *mb option in Product Maker doesn't work properly. (DR 2436) **Refer to User's Manual Section 3.2.1**
When loading a product in the Product Maker using *mb, you get two frames only. Both frames don't have a pressure label. The second has a time stamp of -251868HR Thu 00Z 01-Jan-70.

Workaround: None.

! **Problem:** The "<" and ">" operators have problems with contoured fields. (DR 3453)
The Product Maker has a problem displaying the following field, and other fields with the < operator: (Height[ETA,,,500mb,*]) < (5460). The field is displayed such that the contours closest to 5460 are broken up. An image displayed for this field appears blocky and discontinuous around 5460.

Workaround: None.

! **Problem:** Product Maker - specific humidity field display problems. (DR 3856)
Product Maker has problems when displaying spec_hum (specific humidity) added to spec_hum. The tight gradient of contours is unusually straight, carving a vertical line from

Canada through MT, ID, UT, AZ, and Mexico. This problem was found on AVN, ETA, RUC, and NGM, with RUC displaying a blank space instead of condensed contours.

Workaround: None.

! **Problem:** Product Maker is not able to calculate values of parameters at specific latitudes and longitudes. (DR 4669)
For example, a user could enter an equation of Temp,Eta, 90,40,500,12 to calculate the temperature at 500mb at 90W, 40N for the 12hr Eta forecast. When loaded, the word "Loaded" appears in the Status/Value line, but no value is returned, and nothing appears on the D2D.

Workaround: Some of these values may be obtained by loading the product as an image in the Volume Browser and sampling. Then the value sampled may be manually put into the Product Maker for additional calculations.

! **Problem:** Product Maker can only display satellite images at Northern Hemisphere scale. (DR 4888)
The Product Maker does not allow you to display satellite data at scales smaller than Northern Hemisphere. In previous releases, satellite images could be loaded from Regional scales up to Northern Hemisphere.

Workaround: None.

! **Problem:** The Product Maker abs() and +/- functions do not work. (DR 5058)
Use of these functions yields an "undefined function call" message.

Workaround: None.

! **Problem:** Product Maker hangs on d/dz products. (DR 5150)
The Product Maker will hang when a d/dz operation is selected. This has been seen on all SIT platforms, with various products. For example, trying to load d/dz(temp,eta,850mb,*) will cause the PM to hang when you press load. The WS CPU idle time goes to 0% and the WS slows down.

Workaround: The workaround is to manually kill the pmakr process. The requested field will not load, but the Product Maker will be able to be used again. D2D works even if the PM is hung up. Also, do not enter a '*' to load products. Enter a specific product time.

1.14 Radar

! **Problem:** Radar status bar carries too many messages. (DR 1299) **Refer to User's Manual Section 2.1.5**
Currently the radar status bar is constantly active, displaying various messages concerning the state of the radar, radar line, etc. The large number of messages, particularly the large number of flashing messages, tends to slow down whatever activity is occurring in the large pane. This can be particularly annoying when you have more than one dedicated radar, and thus twice or three times as many messages coming across the radar status bar.

Workaround: None.

! **Problem:** Reflectivity Cross Section and SRR products do not always auto-update. (DR 4627) **Refer to User's Manual Section 2.1.5**
If the baseline on a Reflectivity Cross Section product is changed, and a request is sent to the RPG for a new cross section, the displayed product does not always update automatically.

Workaround: Users can manually request a new cross section for the reflectivity from the D2D menus.

! **Problem:** High Resolution Radar has performance problems. (DR 4653) **Refer to User's Manual Sections 2.1.6 and 2.4**
Some sites have noted that it takes an excessively long time to load and zoom high resolution radar products.

Workaround: Field users should be aware of the performance penalty associated with the use of the Hi Res Zoom option. This option, available on the button-3 popup menu when radial images (Z, V, SRM, STP, DHS, etc.) are displayed, produces an improved image during zoom or pan operations by calculating a zoom-specific lookup table rather than using pixel replication for the zoom function.

Since a new table is computed for each zoom/pan operation, initial load with the high-res option selected is slow: the approximate table-computation time is 2 seconds for a single product in 4-panel mode, and 5 seconds in standard display. (This is once per zoom/pan, regardless of number of frames; double these times for Z/SRM or other combo displays.) Auto-update speed is not affected, since the lookup table is available, but any additional zoom/pan operation requires re-computation and will be similarly affected.

If you are using the high-res option and want to zoom in multiple times, it will be to your advantage to use the pop-up zoom menu, rather than multiple button clicks.

! **Problem:** When an Invalid Password is used in the radar dial-out application, it is not reported to the user. (DR 5208) **Refer to User's Manual Section 7.3**

When trying to dial out to a radar, if the password is invalid, AWIPS fails to report this to the workstation.

Workaround: None. If you suspect the password is incorrect, contact the NCF and ask them to call OSF.

! **Problem:** The Combined Attribute Table is not displaying properly on some AWIPS Radar products. (DR 5377)
Since forecasters often rely heavily on the CAT during severe weather, being unable to display the CAT on the CZ product is a tremendous loss of functionality from the PUP. The user should have the option to "page through" the attribute tables, just like on the MESO and TVS products.

Workaround: Even though the CAT was not displayable on the CZ product, it is showing up on the composite reflectivity contour (CZC) product

! **Problem:** Combined Attribute Table is not displaying properly in the Comp Refl Contour product. (DR 5386)
When a composite reflectivity contour (CZC) product is called up during active weather, seven combined attribute tables (CATs) come up and cover the screen. One CAT should have appeared and given the user the option to "page through" the remaining CATs. This functionality seems to work with some of the other attribute tables (like with the MESO or the TVS), but it does not work properly on the CZC product.

Workaround: None.

! **Problem:** RMR_Server fails to display all user requests. (DR 5426)
The RMR_Server does not display all user requests if there are more than 13 or 14 requests.

Workaround: Open a request by selecting the + to show the additional requests.

! **Problem:** Some RCM products are not processed correctly on AWIPS. (DR 5472)
On some of the RCM products the VAD wind information is missing. Only the first wind group appears on the same line as the header information. On the PUP, the wind groups appear on the second line.

Workaround: None.

! **Problem:** Incorrect smoothing of 4km data beyond 125nmi. (DR 5975)
When you call up the 1km (0.54nm res.) CR from the Kxxx pull down menu (under derived products), it displays .54nm resolution data out to 125nm (no problem). The 4km (2.2nm res) CR displays beyond 125 nm with a 2.2nm resolution on the entire product (no problem).

The problem occurs when you call up the Composite reflectivity at the top of the Kxxx pull down menu. It displays the 1km (.54nm res) CR out to 125nm, and the 4km (2.2nm res) CR beyond 125nm. The 4km CR beyond 125nm appears as if it had been contoured (smoothed) before it was displayed.

Workaround: None.

1.15 Surface

Refer to User's Manual Section 2.1.6

! **Problem:** Indefinite ceiling values not plotted correctly on Ceil/Vis plot. (DR 1287)
The Ceil/Vis plot on D2D shows cloud cover and visibility information for metar stations across the country. The number in the upper left of an individual station plot is the ceiling height in 100's of feet, decoded from that station's METAR observation. When this ceiling is coded as VV001 (the VV is used when there is an indefinite ceiling or very low visibility, e.g., fog), instead of the normal OVC001 for example, the Ceil/Vis plot will incorrectly show an M for missing the ceiling on the plot, when it should show a 1 (one) in the above example. AWIPS is not properly decoding the ceiling information when the VV designation is used in the METAR.

Workaround: When ceiling values are displayed as missing, use mouse button one sampling to look at the station's METAR.

! **Problem:** ICWF 3 ½ hr Station Plots are not available during site backup. (DR 1791)
The ICWF Station Plots under the Forecast data section of the Surface menu do not work during site backup or at a site where IFPS does not match the FXA_LOCAL_INGEST id.

Workaround: These data are still available through IFPS.

! **Problem:** Plots of 3 hour pressure change from the METARs do not match the change in pressure in METAR plots. (DR 3173)
There is a problem with the treatment of pressure change on the METAR station plot. The pressure change typically shows a rise or drop in the last three hours, but the pressure change variables are not matching the pressure variables. Furthermore, when the actual pressure change is large, there seem to be greater errors in the pressure change depiction. For small actual pressure changes, the pressure change depiction is correct or just slightly off.

Workaround: None.

! **Problem:** Lightning data does not update graphically on the one minute updates. (DR 3473)
If the data does not change, the last changed data continually is sent to the one minute update logs, but the graphics do not generate until a change occurs.

Workaround: None.

! **Problem:** Canadian SAO's are not included in Surface Plot. (DR 4559)
Many non-airport observation stations in Canada are not required to change their reporting format to METAR, and therefore will continue to produce data in SAO format. This data will not be successfully decoded by AWIPS, and thus will not appear on the Surface Plot product in D2D.

Workaround: None.

! **Problem:** The elevation for all maritime stations is assumed to be zero. (DR 4616)
This assumption is of course correct for all buoys, CMANS, etc. located in oceans and gulfs, but is not correct for those maritime sites located in the Great Lakes for example, where elevations can range up to a couple hundred meters. Assuming an elevation of 0 at these locations will cause errors in those MSAS products that involve calculations using elevation, such as potential temperature analyses.

Workaround: None. Users should examine MSAS analyses in areas where maritime observations are taken at elevations greater than 0 to verify accuracy before using the data.

! **Problem:** Maritime station pressures are not being saved. (DR 4617)
Saving this data would allow for additional quality control checks on sea level pressure observations.

Workaround: None.

! **Problem:** Caribbean observations are dropped before they are decoded. (DR 5413)
Some sites in the Gulf of Mexico region have said that they are unable to display many observations from the Caribbean. The system should be baselined to allow sites to ingest and decode these observations.

Workaround: Ingest of these data will be baselined in the system in the future. Until then, the System Manager's Manual provides instructions for the sites to add observations to both the plot files and the text database.

! **Problem:** Select metars cannot be sampled on the metar plot graphic. (DR 5443)
Certain metar stations cannot be sampled on the metar plot graphic on D2D. When you sample the station, the active marker reports "No Data", even though the observation for that station for that time is present and displayable in the text database on the text workstation. The Text Reader process logs an instance of the sampling occurring exactly the same as for an ob that can be sampled. Three stations that this occurs with are SLCMTRSLC, CYSMTRRIW, and WBCMTRAKQ.

Workaround: None. However, you may obtain the data using the text workstation.

! **Problem:** Station surface station model plot reports sky condition of "SKC" as "M". (DR 5397)
On the D2D surface station model plot display, if a METAR observation has "SKC" as its sky condition, then D2D uses an "M", for missing, on the station model plot. It should be plotting with an open circle. The functionality works properly for automated observations, which use "CLR" for clear skies. But, the manned observations, which use the "SKC" mentioned above, do not.

Workaround: None.

! **Problem:** CPC heat index Redbook info needs to be updated. (DR 5875)
The CPC heat index ("Excessive Heat") Redbook graphics titles and labels need to be updated. CPC has changed thresholds and also changed the name from apparent temperature to excessive heat.

Workaround: In redbookDepictKeys.txt, change "Apparent Temperature" to "Heat Index" and change the numbers 90->85, 95->90, 100->95.

In redbookProductButtons.txt, change the numbers, and also put "of 5" after day/s (e.g., >= 85F for 3 days of 5).

In redbookSurfaceMenus.txt, change Apparent Temp to Heat Index.

Then, run the following localization: ./mainScript.csh -tables as fxa on all the workstations and servers, and then restart the D2D.

1.16 Terminal Aerodrome Forecast (TAF) Monitoring

Refer to User's Manual Section 8.1

! **Problem:** Duplicate Text check now works correctly. Previously, extra spaces, control characters, and carriage returns at the end of products caused the duplicate check to fail. (DR 5404)

Workaround: None

! **Problem:** The TAF Monitoring Graphical User Interface fails to display fractional visibility values in a TEMPO group. (DR 5144)
The TAF monitoring GUI is not displaying some fractional visibility values which appear in the TEMPO group of a TAF when an amendment notification is generated. The value is not being displayed in the Discrepant Element Summary section when an amendment notification is received for a TAF site. The fractional values which do not display are 1/8, 1/4 and 3/4.

If forecast in the prevailing conditions of the TAF, the same fractional visibility values display correctly.

Workaround: The visibility values appear in the TAF report appearing below the Discrepant Element Summary. The monitoring process which determines if an amendment notification is needed is not affected by this problem.

1.17 Terminal Aerodrome Forecast (TAF) and Transcribed Weather en route Broadcast (TWB) Generation

Refer to User's Manual Section 4.2.3

! **Problem:** TAF and TWB transmission scripts use wrong PIL. (DR 4795)
The transmission scripts read TAFWRK and TWBWRK collectives from the Text Database, format them into individual products, and send them to the MhsServer for transmission to the WAN. The transmission scripts use the AFOS PILs DENWRKTAF and DENWRKTWB to access the database. These entries will not be found in the database at any site except Boulder.

Workaround: The post-install instructions for 4.3 provide instructions for changing the AFOS PILS in transmitTAF_national.tcl and transmitTWB_national.tcl.in the /awips/fxa/bin directory. Field users need to edit /awips/fxa/bin/transmitTAF_national.tcl and /awips/fxa/bin/transmitTWB_national.tcl to replace DENWRK with <CCC>WRK, where <CCC> is their appropriate identifier. This will need to be done on each workstation. Instructions are also in the System Manager's Manual.

! **Problem:** TDL TAF Editors run concurrently may overwrite each other's work. (DR 5853)
The TDL TAF Editor saves work to /data/fxa/siteConfig/aviation/tmp/tafedit.work. This can be done manually, or automatically if the option is set in the GUI. All GUIs on all workstations write to the same work file, so there is the potential that if two TAF Editors are running, the work from one will be overwritten by work from the second. When the TAF Editor starts up, it does not warn the user that another instance of it is running. This could be a big problem if the Auto Save option is turned on. Work will be overwritten automatically every 30 seconds.

Workaround: Most WFOs will run just one TAF Editor at a time, so this will not be a problem for them. If your office uses more than one, turn off the Auto Save feature. Before sending the TAFs out, make sure that the TAFs in the window are for the sites that you are working on and not the sites in the other TAF Editor that is running.

! **Problem:** TAF Editor has incorrect valid times with some product types. (DR 5854)
The TAF Editor sets the valid times for TAF products based upon the type of TAF and the current time. When the type Correction is chosen, the letters "DD" appear in the date section

of the DDHHHH format. The rest of the valid time format has correct hours chosen. This problem occurs only when loading from template and not from last.

Workaround: Edit the "DD" to be the correct day.

1.18 Text Editor and Browser

Refer to User's Manual Section 4.2.5

! **Problem:** Help function is incorrect in Text Browser for international origin. (DR 3886)
There are a couple of discrepancies with International sites. In the node section, the help function gives Wisconsin Rapids, WI for ISW. This is correct for the US KISW, but incorrect for the International site. The other discrepancy is choosing ICO as the node and CO1 under MTR. Using the help function on this, the user gets Rivers in Colorado. However, ICO is the International site Columbia.

Workaround: None. You can retrieve the data by typing in the AFOS pils in the load cmd command line for these discrepancies.

! **Problem:** The text editor autowrap does not work. (DR 5309)
Using the AWIPS text editor, when one edits an existing 69 character line in a product, and, as an example, replaces "showers" with "thunderstorms" and then ends the editing with the cursor still on the "s", the product will exceed the 69 character format even with the option set to 69 characters.

Workaround: Manually place carriage returns where needed to adhere to the limit on 69 character per line products.

! **Problem:** Modifications via the Text Workstation are being dropped. (DR 5428)
When Informix is unavailable and the text workstation has to wait for it to become available before saving, creating, or sending a message, it will report "child process exits abnormally" or "unable to write to the text database". In this situation, the modifications are lost, the message is not created, or the message is not sent.

Workaround: Acknowledge the error, close out the application, and start again.

! **Problem:** There are two headers in products created with the Text Editor after a user opens the editor, cancels an edit session, and returns into the editor. Additional headers cause havoc with CRS and other automated software that key off the header. (DR 5456)

Workaround: Manually remove the second header.

! **Problem:** The Text Editor does not allow product designator of "0". (DR 5665)
If you attempt to edit a product using the text editor that has a product designator of 0, you get an error saying that the product designator cannot be 000. You are then unable to enter the text editor with that product designator. This may only be a problem in the case of the SAW0 product, but if SPC moves to AWIPS to create their SAWs, or if the sites eventually issue their own, this will prevent them from using SAW0 as one of the 10 IDs for SAWs.

Workaround: Use another SAW ID (SAW1-9), if that is acceptable. The SAW0 could be viewed, but just not edited and transmitted.

1.19 Text Product

Refer to User's Manual Section 4.3

! **Problem:** Text Products - TWB and TAF. (DR 1198)
TWB and TAF text products are being truncated too far to the right when received from AFOS into AWIPS. The TAF products are being truncated five spaces to the right and TWB products are being truncated two spaces too far to the right.

Workaround: None.

! **Problem:** Local Text Products. (DR 1354)
Local text products are being truncated from AFOS to AWIPS.

Workaround: Add these products to the large text database on the data server via the textdb -l (lower case L) command. This will correct future acquisition of these products.

! **Problem:** WMO Header DFUS1 is not categorized properly. (DR 3017)
This text product, GGFFOFUS, is categorized incorrectly by AWIPS as a gridded product.

Workaround: None. This product has an incorrect header, assigned at the NWS Gateway.

! **Problem:** Mexican text products (TFFF) need to be updated in ispan_table.dat.
(DR 4028)
The Mexican text products are now valid, and need to be updated in ispan_table.dat. As an example, the product SSMR1 is now SSMR01. These products are currently being discarded.

Workaround: None.

! **Problem:** Site will receive a requested product regardless of version if product WMO ID is unknown. (DR 4137)
With the Request/Reply function, if a site requests a product that cannot be found in the WMO ID table, the request will go out with XXX for the WMO ID and CCCC, and the site will receive the product back from the remote site even if it is the same version of the product

as that already in the requesting site's database. The request is still sent, but the remote site will satisfy the request even if it has no newer versions. If the remote site sends the same version back, the requesting site will write it to the database as if it were a newer version, resulting in duplicate copies of the product in the database. The requesting site should instead receive a message back from the remote site stating no newer versions of the product were found.

Workaround: None, but minimal operational impact.

! **Problem:** textdb -w will allow duplicate products to be written to the text database. (DR 4141)
In 4.2, a fix was put in place to prevent duplicate copies of text products received by a site from being written to the text database. A remaining loophole is that it is still possible for users or applications to write duplicate copies of a product to the database using textdb -w.

Workaround: None. However, there should be no operational impact.

! **Problem:** Canadian Synoptic Summary product (SSM) storage problems. (DR 4596)
The SSM product is not being stored in AWIPS. One site made local modifications to allow the product to be stored in the text database, and discovered a more fundamental problem. The SSM product is produced by several different sites, but all products fall under the same WMO header, in this case SMCN07 CWAO. The collective decoder is unable to parse out the individual products when they are all under the same WMO header.

Workaround: None. The most recent products will still be viewable on the text workstation.

! **Problem:** The Canadian Synoptic Summary product (SSM) data are not parsed. (DR 4703)
These data allows the offices to write programs to use the data via LDAD to enhance rainfall estimates.

Workaround: None.

! **Problem:** Canadian Synoptic Summary product (SSM) is not decoded. (DR 4704)

Workaround: None. The impact is that the amount of data both wfos and rfcs use to verify forecast and rainfall will be reduced.

! **Problem:** FOUS12 KWNO products do not store in AWIPS. (DR 5336)
FOUS12 KWNO carries products with PILs like NMCFTPXXX (e.g., NMCFTPHFD, NMCFTPMSR, NMCFTPKRF, etc.). The problem is that the AWIPS baseline provides no manner by which to store these products uniquely.

Workaround: FOUS12 KWNO may be placed in the ispan table. However, multiple products will be stored under one generic pil. That's not a very elegant solution. The current workaround at TAR is to send FOUS12 KWNO to a local directory, directly from the acq_server. Then site-developed post processors are used to QC the data, send the data to the Shef Decoder, and write the product to the text DB with the appropriate PIL.

! **Problem:** APS/handleOUP text products fail the duplicate text check. (DR 5498)
Any product created by APS and handleOUP is failing the duplicate text check. The StdDBDecoder checks the products and does not see them as duplicates. As a result the products are stored in the database.

Workaround: None. The APS always stores products in the textDB slightly differently from the way the StdDBDecoder does. The workaround is to delete any unwanted products from the database, or to migrate to using LDAD instead of the APS.

1.20 Tools

Refer to User's Manual Section 2.1.7

! **Problem:** Magnification and Density control setting may not be displayed correctly after a pane restarts. (DR 740)
If the large pane crashes after the magnification and/or density has been changed, the menu will erroneously display the modified settings upon restart of the pane, even though they return to their default 1.00 settings.

Workaround: Change the Magnification and Density to another value, and the value displayed should be correct.

! **Problem:** Forecast Time vs. Inventory Time. (DR 1611)
When using Inventory Load Mode, in the Select Forecast and Inventory dialog box, the forecast times and inventory times match only for the first inventory time listed.

Workaround: The forecast time the user loads can be determined manually from the Inventory time and the hour forecast (HR) section of the Forecast time section.

1.21 Upper Air

Refer to User's Manual Section 2.1.6

! **Problem:** Profiler horizontal and vertical variance data missing. (DR 3513)
Profiler horizontal and vertical variance fields are not being included as part of the normal data stream that AWIPS receives. These data will have to be included in the normal AWIPS data stream before they can be viewable on AWIPS.

Workaround: None.

! **Problem:** Interactive Skew-T boxes not appearing on first try. (DR 4105)
Occasionally when bringing up the Interactive Skew-T, the two dialog boxes associated with it don't pop up as they are supposed to. This occurs 5-10% of the time.

Workaround: The user must clear the large pane and reload the Skew-T.

! **Problem:** Exiting the Interactive Skew-T results in a traceback in the skewT_wish log. (DR 4106)
Clearing the large pane on D2D with an Interactive Skew-T loaded causes a traceback to occur within the skewT_wish process. This traceback does not appear to cause any problems or affect operations.

Workaround: None.

! **Problem:** Profiler time heights and isobaric Profiler plots are not consistent. (DR 4625)
Some stations report no data at higher pressure levels in the plots brought up with Upper Air -> Plots -> Pressure Level while the data is available in the Upper Air -> Time height menus.

Workaround: Look at the data for these stations in the Time height menus.

! **Problem:** Label magnification problem with hodograph. (DR 5170)
Working with IST and Hodograph, it was found that if one zoomed in over hodograph and toggled Helicity/Storm Inflow on from Skew-T controls window, the values/labels don't reduce when one zooms back out.

Workaround: Once zoomed back out, the Helicity/Storm Inflow has to be toggled on and off again to force it to reduce magnification.

! **Problem:** Layer wind computations are incorrect on the AWIPS skewT (DR 5348)
A site reported that they thought the "0-3 KM STM MOTION" on the AWIPS skewT was in error. They also thought the "0-6 KM AVG WIND" may be wrong, too.

Workaround: None.

! **Problem:** Problems with Upper Air menu MRF products. (DR 5361)
Under the upper air/model graphics menu, the MRF 0-5 wave 500 Height menu entry for the northern hemisphere, the system displays 500 MB height fields instead of the 0-5 wave height fields. This occurs for 00 hr, 24 hr, 48 hr, and 72 hr. The MRF 500 MB height menu entry displays no data. However, the 108 hr forecast time is populated correctly with the 00 hr 0-5 wave height field.

Workaround: None. These products are not currently available.

1.22 Volume Browser/Grid Products

Refer to User's Manual Section 3.1

! **Problem:** QPF fields in gridded data. (DR 658)
A difference was noted in the AVN model QPF fields when comparing WFO-A displays with the N-AWIPS display. The discrepancy involved the 60-72 hour projections. Essentially, when displaying the 12Z run of the AVN model, the WFO-A system indicated that close to 2 inches of rain would be received in the DCA area while N-AWIPS indicated all rain would pass to the south.

Workaround: None. COMET is performing an analysis of AWIPS vs. N-AWIPS displays. This is a long-term effort.

! **Problem:** ETA Model Precipitation error. (DR 1092)
The Eta Precipitation field differs from the current PCGRIDDS product in that AWIPS shows a .01 contour where PCGRIDDS shows 0.

Workaround: None. COMET is performing an analysis of AWIPS versus other system displays. This is a long-term effort.

! **Problem:** Erroneous differences between the 6hr/24hr MesoEta Precip. (DR 1328)
Discrepancies have been observed between the 6hr and 24hr MesoEta precip plots ending at the same time, such as the amount on the 6hr plot being greater than the amount on the 24 hr plot.

Workaround: None.

! **Problem:** Time Series Scales (DR 1405)
Time Series' of Surface Temperature (F) and Dewpoint from the NGM and AVN show separate scales on the y-axis. This makes the graph confusing and hard to read, because the dewpoint line is crossing the temperature line.

Workaround: None.

! **Problem:** NCEP grid and coding for ETA model. (DR 1629)
The resultant data from the ETA ingest has the maximum and minimum temperatures off by twelve hours. This also results in a steady temperature trace. The data is sent from NCEP in this format.

Workaround: The NWS Office of Meteorology (OM) is working with NCEP on a number of data issues, including this one.

! **Problem:** Unofficial Hourly Rainfall data plotted. (DR 1878)

When an ‘official’ hourly rainfall message is received, the data is plotted correctly. However, if a correction is then submitted as an ‘unofficial’ report, that data is now plotted instead of the official data.

Workaround: None.

! **Problem:** Small map in Volume Browser Time Series products doesn’t change to accommodate new point locations. (DR 2398)
If a product is loaded, for example, for the west area of the CONUS, and then a second product is loaded for the east area of CONUS, the small reference map does not change to include the location of the second product.

Workaround: None.

! **Problem:** Temporal Resolution of AVN in 500mb Comparison. (DR 4266)
There is an inconsistency in the temporal resolution of the AVN model run. If the user loads AVN on the N American scale, the resolution is 3 hours. At the CONUS scale, a resolution of 6 hours is displayed. The inconsistency arises with the 500mb Comparison on the CONUS scale. The AVN appears with a temporal resolution of 3 hours. This causes some confusion to the sites, because the Eta and NGM plots are unable to time-match the intermediate fields. It doesn't seem problematic to have the AVN loading the 3hr resolution on the CONUS scale, that just gives more data, but maybe the AVN should be loaded in such a way that it's forced to time match the other models in the 500mb comparison product.

Workaround: None.

! **Problem:** Time Series product will infrequently not display on D2D. (DR 4570)
Infrequently, an attempt to load a Time Series product in a D2D pane will fail. The display log for that IGC process will report errors.

Workaround: This appears to be a very infrequent problem. If it occurs, try loading the product on the other monitor of the workstation, or on another workstation, and it should successfully display.

! **Problem:** Time Series graphic may lock D2D if it is loaded or auto-updated during ingest of a model run. (DR 4637)
If a Time Series graphic is in or loaded to any D2D pane during ingest of its particular model run, the D2D may hang for 20 to 30 minutes. When this happens, CPU utilizations maintain a very high level for an extended period with nfsd daemons near the top of the process list.

Workaround: The workaround is to clear the screen if a time-height or time series is displayed and model update causes performance to suffer.

! **Problem:** Vertical Circulation displays wind barbs and not stream lines when loaded from the Volume Browser in cross section mode. (DR 4756)

Workaround: None. The same information is available in the wind barb format.

! **Problem:** Some isentropic fields for the Eta model are not displaying. (DR 4961)
When you load a couple of Eta products, not all of the frames can be displayed, nor are all the frames viewable in the inventory on the Volume Browser. The frames that are visible are different on different systems. The products that display this problem are Isentropic Winds and Potential Vorticity.

Workaround: None. However, these products will be available through other models.

! **Problem:** Time Height Cross Sections using Procedures (DR 5177)
If a Time Height Cross Section is generated using the volume browser, and is called up again later using a procedure, it does not work correctly. If the point is moved to a different location and the procedure is re-run the Time Height Cross Section image field is for the original location, and the graphic is for the new location.

Example: A user goes to the volume browser and does a time height cross section using point A over Richmond VA. and selects Eta, Temp, and Rel Hum. (as an Image) . Next the user saves this as a procedure. The user then moves point A to Miami. When the procedure is re-run the time height cross section has the graphic field for Richmond and the image field for Miami.

Workaround: None. Do these product combinations manually without using procedures.

! **Problem:** The Eta 6-hr precip product does not display at 54 and 60 hours. (DR 5571)

Workaround: In /awips/fxa/data/eta211.cdl, the part that looks like:

```
_tp12 = 1.e37f, 1.e37f, 1.f, 1.e37f, 1.f, 1.e37f, 1.f, 1.e37f, 1.f;
_tp6 = 1.e37f, 1.f, 1.e37f, 1.f, 1.e37f, 1.f, 1.e37f, 1.f, 1.e37f;
```

now needs to look like:

```
_tp12 = 1.e37f, 1.e37f, 1.f, 1.e37f,
1.f, 1.e37f, 1.f, 1.e37f, 1.f, 1.e37f, 1.f;
_tp6 = 1.e37f, 1.f, 1.e37f, 1.f, 1.e37f,
1.f, 1.e37f, 1.f, 1.e37f, 1.f, 1.e37f;
```

(i.e., two items added to each to reflect the new projections.)
(1) Edit the .cdl, as above
(2) Run the -grids localization task.
(3) Copy /awips/fxa/data/localizationDatasets/<site>/eta211.cdlTemplate to /data/fxa/Grid/SBN/netCDF/CONUS211/Eta/template.

(4) Copy the edited eta211.cdl to all hosts so that no later localizations accidentally undo the change.

! **Problem:** The Vorticity advection calculation has a small error. (DR 5691)

Workaround: None. This is a very subtle error and is probably not visible as an error at the sites.

1.23 Warning Generation (WarnGen)

Refer to User's Manual Section 5

! **Problem:** WarnGen still lists independent VA cities as counties in some WarnGen products. (DR 1394)
Severe High Wind Warning, Flash Flood Watches, and Flood Warnings show the independent cities of Virginia as counties. DC is listed as a county in Maryland in Blizzard, Blowing Dust, Blowing Snow, Flood Watch, Dense FogAdvisory, Freeze Warning, and Frost Advisory WarnGen products.

Workaround: All erroneous text must be manually edited on the text workstation.

! **Problem:** Full Backup Selection Option. (DR 4059)
In order to return to the nominal WarnGen configuration, the local site ID must be added xxx-wwaConfig.txt. The problem comes from the fact that a user can select an alternate full backup site, but then cannot get back to the home localization within the same WarnGen session. The fix is to the @@@SBID tag.

Workaround: Edit /awips/fxa/data/localization/<site>/<site>-wwaConfig.txt to add the site to the @@@SBID line. Then relocalize the workstation with the -wwa option.

! **Problem:** Large combined Home CWA and Partial Backup Coverage causes anomalies. (DR 4136)
At SLC, which has a large partial backup area of responsibility (AOR), when using the third mouse button to add and delete counties from the warned area and then using the "Redo Box" feature, WarnGen will lock-up, requiring a UNIX "kill" command
to restart the WarnGen process (D2D/IGC is not effected by this anomaly). The lock-up has been observed while using WarnGen in normal mode as well. This anomaly is not observed when SLC is only given the ability to partially back up itself (i.e. no other partial backup counties are selectable), and is not seen with the smaller specified partial backup AOR configurations at PBZ and BOX. The problem appears to occur at sites that have very large combined CWAs and partial backup AORs. Possible fault results from exceeding memory allocation. Operational impact of fault should be limited to large Western Region CWA with large partial backup AORs. It is unknown at this time if this problem will be encountered in

the field since the partial backup AORs are still being defined by Regional and WSH management. The SLC partial backup AOR where this problem was observed is not the final AOR (the final SLC partial backup AOR will likely be smaller than the one tested for this DR).

Workaround: None. Some western region sites that may be affected by this problem may not be provided with any choices for partial backup CWA's other than their own.

! **Problem:** Marine zones with long IDs in WarnGen may not appear correctly. (DR 5262)
For building the tables that contain WarnGen ID strings, there is a limit on the length of the id strings associated with each geographic entity, and this has become problematic for building the marine_zones tables.

Workaround: Keep the length of the marine zone ids to 131 or less.

! **Problem:** Redundant entries in warning cities map background. (DR 5263)
There is currently a bug in the script that makes the warning cities map background. The warning cities map background may be generated with some redundant entries.

Workaround: None. It works for the most part. The differences are very subtle.

! **Problem:** Need to be able to have more cities in warngen tables. (DR 5351)
Some sites (notably DVN), when they have attempted to install shape files that completely define their partial backup area, end up with too many cities in their warning cities table. The result is that their warning cities table does not build at all and thus they have no cities in their warngen products.

Workaround: Use the version of makeGeoTables found on noaa1:./awips/fxa/bin (where . is the home ftp directory.

! **Problem:** There is an omission from the header for service backup warngen products. (DR 5352)
The default header for service backup products should say:

NATIONAL WEATHER SERVICE GRAND JUNCTION CO
ISSUED BY NWS DENVER CO

whereas it currently says:

NATIONAL WEATHER SERVICE GRAND JUNCTION CO&
ISSUED BY DENVER CO&

Workaround: On each workstation, edit /awips/fxa/data/localization/scripts/makeWWA tables.csh to change:

"ISSUED BY $issb&"

to:

"ISSUED BY NWS $issb&"

! **Problem:** Column formatting in Warngen fails for one item. (DR 5353)
When using column style formating of output in a warngen template, it fails if there is only one item to be formatted.

Workaround: There is no workaround other than to avoid use of column format.

! **Problem:** warnGen has incorrect behavior with no cities in the pathcast. (DR 5369)
By default, warnGen was designed to provide county locations in the pathcast if no cities were in the pathcast. A bug is preventing this from happening. While this is the most obvious symptom, there are other more subtle problems created in pathcast because of this bug.

Workaround: None.

! **Problem:** The work SLS product has too many cities. (DR 5395)
By design, the work SLS product is supposed to just include level one cities. There is a bug in it that makes it include all cities.

Workaround: In /data/fxa/nationalData, edit sls.preTemplate to change a 1 to a 2 in two cases.

Change line 33 to read:

|include_field=2 | include_text=1

and line 38 to read:

|exclude_field=2 | exclude_text=3 |max_count=-50

Make the same changes to sls.template on each workstation in /awips/fxa/data/localizationDataSets/<site>

! **Problem:** There are spurious watches in warnings. (DR 5565)
Some watches are mentioned in warnings even if they do not affect the CWA. Specifically, if SAWn does affect the CWA and SAWm does not but is currently valid, SAWm will be mentioned in the warning if m>n. To test it at an arbitrary time, one would need to edit some SAW products by hand, but that is very easy.

Workaround: Edit the product to remove watches that do not belong in the product.

! **Problem:** Text Warngen window keeps old products after it's closed when accum button is on. (DR 5812)

A site issued one or more warnings using Warngen. After the severe weather subsided, the "Text Warngen" window was cleared on the workstation but was never closed down. The forecaster then proceeded to use the Text Warngen window just like it was a normal Text window on the workstation, which would seem logical. The forecaster turned on the accum button in the Text Warngen window and called up several products, which accumulated in the Text Warngen window as expected. The forecaster then closed down the Text Warngen window, with the accum button still on. Sometime later, convection began firing again. The forecaster needed to use Warngen and started the program. When the Create Text button was clicked and the Text Warngen window appeared on the text workstation, it came up with the accum button still on. All of the products that the forecaster had called up before the window was closed down were still in the window.

Workaround: None.

2.0 INTERACTIVE FORECAST PREPARATION SYSTEM (IFPS)

2.1 IFPS Grid

! **Problem:** Early/Extended Forecast -- data overwriting. (DR 999)
When the early and extended forecasters have performed grid modifications at the same time and have exited TIS, the unloading process results in the overwriting of data. The forecaster who exits last will have his/her changes unloaded. The other data seems to have reverted to the original guidance.

Workaround: Each forecaster must modify the grids independently.

! **Problem:** Slider parameters can not be re-initialized in IFPS. (DR 1517)
After making changes to any slider element (wind, cloud, etc.), those changes cannot be removed by re-initializing the grids from the Tailor Initialization Selector. The asterisk will initially disappear, but will reappear if the user re-enters the Tailor Initialization Selector.

Workaround: Reset the Slider threshold back to the default setting within the Slider application.

! **Problem:** IFPS Grid Modification Gridpoint Drag Tool. (DR 1774)
When dragging a highlighted area using the Drag tool, the highlighted area is reduced in size as the area is moved to the map edge. Any part of the highlighted area that disappears off the map does not return as you move back into the middle of the display.

Workaround: None.

! **Problem:** IFPS - time annotation disappears for fast animation with Sliders. (DR 1781)

In Sliders, when the animate time is set to fast, the time annotation in the Forecast Projection window (which indicates the current frame) disappears.

Workaround: Slow down the animation.

! **Problem:** Grid MODIFICATION window crashes in IFPS. (DR 2428)
GMOD crashes when the user accesses the push/pull tool on a grid of equal numbers (i.e., every grid point contains the same value).

Workaround: None.

! **Problem:** Time/Space adjustment does not change Time as expected. (DR 5046)
When adjusting time and using greatest magnitude, erroneous cloud data are shown in some grids. The erroneous data are Broken 1 for the entire grid, spans 2 or three grids, and only appears consistently when viewed from left to right. When viewed in any other order, only the first grid consistently appears as Broken 1. Erroneous data does not carry down to Zones, which will lead to further confusion.

Workaround: Manually edit the slider data moving it to the desired number of grids either left or right.

! **Problem:** When bottom slider moved all the way to "Most" the grid goes to zero. (DR 5118)
Quite often when the bottom slider is moved to "Most" the grid actually goes to a lesser number, and often zero or the least on the color bar. A single click toward "Less" often gives a higher number or color value.

Workaround: Manipulate the numbers in Zones, stations, or after the product is created.

! **Problem:** Slider panels often appear with no data. (DR 5119)
Some slider panels appear with no data and the slider bars greyed out. This is intermittent as using next or previous grid often brings the data back.

Workaround: Exit out of the slider and come back in. The correct data should appear.

! **Problem:** Some precip probabilities are greater than 100%. (DR 5120)
Values greater than 100% appear and disappear quickly as there is no steady rise as the slider bar is moved towards "More" instead a jump to the value.

Workaround: Adjust the slider again. Also, the erroneous values could not be found in any forecast products.

2.2 IFPS Matrix

! **Problem:** IGR not redrawing correctly after switching font sizes. (DR 2245)
When the user attempts to switch font sizes, the digital data will no longer fit inside of the geographical matrices or full matrix. In other words, the matrices are correctly resizing, but the font is not proportional to the size of the matrices.

Workaround: Do not change font sizes.

! **Problem:** Changing fonts causes IGR to crash. (DR 3920)
Trying to change the font size using the Options menu item in the Interactive Guidance Revisor (IGR) window causes the application to crash and returns the user to the main menu.

Workaround: None.

! **Problem:** IGR modifies dewpoints on its own. (DR 4891)
A forecaster reported that he modified dewpoints in the 3rd/4th periods, then moved to winds. When checking back on the dewpoints, the forecaster noted that they had been raised 5 - 10 degrees from what he had done and that they were higher than the minimum temperature.

Workaround: The IGR portion of the problem corrected. The problem could still occur when unloading the grids. If it does, use IGR to correct.

! **Problem:** IGR crashes when the number of MOS combos differs from the number of working combos. (DR 5460)
IGR will crash if the number of MOS DFMs differs significantly from the number of working DFMs. For example...1) forecaster enters ICWF to make 3 combinations on a 00Z cycle; 2) forecaster modifies these data and saves; 3) MRF ingest comes in and redoes the MOS combinations from "3" to "44"; 4) Attempts to enter IGR for an update, IGR crashes since the number of working DFMs is 3 and MOS DFMs is 44.

Workaround: Place 4.2.6 version of cwfcs back on-line. In 4.3.1 cwfcs has a bug (DR 5174) which is placing each zone into an individual combination. This is causing IGR problems after the MRF run.

! **Problem:** IGR needs to track LE DFMs upon saves better. (DR 5526)
At startup and after each data save, IGR makes a copy of the base DFMs and marine DFMs. These data are used for 2 purposes. They control the entries IGR makes into the data_trail table and they control the dialog selections in a multi-IGR situation. There is no attempt made to save or check the local effect DFMs. Igr should be enhanced to save these data and perform these checks. If local effect DFMs are added, deleted, or reassigned between saves, this should be treated as a change to all elements and times for all LE DFMs.

Workaround: None.

2.3 IFPS NOAA Weather Radio (NWR) Interface

! **Problem:** The GEO-REMAPPER crashes when NWR button is selected. (DR 4722)
When the user selects the NWR button in IFPS, a few dialog boxes popup and then it returns to the master menu. The geo-remapper is crashing with a segmentation violation.

Workaround: Wait until the ZFPs for the surrounding offices have been issued before entering the NWR button. Also, you may try turning the light from red to green from Zones to NWR.

2.4 IFPS Other

! **Problem:** Topo adjustments not consistent in ICWF. (DR 971)
Several of the ICWF applications (slider, gmod, ics, igr, wwa, etc.) contain interactive interfaces to adjust the topography. These interactive interfaces are not consistent between the ICWF applications.

Workaround: None.

! **Problem:** Cannot print with IFPS. (DR 1773)
The applications within the ICWF are unable to print screen captures.

Workaround: Modify the printer within the various Xdefaults files located within /awips/adapt/ifps/Xdefaults.

Gformccc:
Change --
Gformccc*printer_name_fld.value: laserjet4
To --
Gformccc*printer_name_fld.value: lp1

Gmodccc:
Change --
Gmodccc*graphic_tb.set: True
To --
Gmodccc*graphic_tb.set: False
Change --
Gmodccc*full_screen_tb.set: False

To --

Gmodccc*full_screen_tb.set: True

Change --

Gmodccc*full_screen_tb.sensitive: False

To --

Gmodccc*full_screen_tb.sensitive: True

Change --

Gmodccc*printer_name_fld.value: laserjet4

To --

Gmodccc*printer_name_fld.value: lp1

Gweightccc:

Change --

Gweightccc*printer_name_fld.value: laserjet4

To --

Gweightccc*printer_name_fld.value: lp1

Igr_ccc:

Change --

```
xgrabsc -display IGR_DISPLAY -id IGR_WINDOW -landscape -xwd |\
convert -font timb24 -pen white \
-draw 'text 958,930 "ICWF "`date + '%D %H:%MZ'`"" -
/tmp/igr.gif
```

To --

```
play IGR_DISPLAY -id IGR_WINDOW -ps landscape | lpr -d lp1&
DDD -stretch -grab -ps -landscape -page 8.
0.5 | lpr -dlp1 &
```

Sliderccc:

Change --

```
Sliderccc*printcmdFull: xgrabsc -d DDD -id XXX -ps
-landscape -page 8.5x11.0-0.5-0.5 | lpr -dlaserjet4 &
```

To --

```
Sliderccc*printcmdFull: xgrabsc -d DDD -id XXX -ps
-landscape -page 8.5x11.0-0.5-0.5 | lpr -dlp1 &
```

Change --

```
Sliderccc*printcmdSelect: xgrabsc -d DDD -stretch -grab -ps
-landscape -page 8.5x11.0-0.5-0.5 | lpr -dlaserjet4 &
```

To --

```
Sliderccc*printcmdSelect: xgrabsc -d DDD -stretch -grab -ps
-landscape -page 8.5x11.0-0.5-0.5 | lpr -dlp1 &
```

! **Problem:** IFPS - Master Menu does not update most recent model run time. (DR 1780)

In the Master Menu, if a new model run arrives while IFPS is running on a workstation, the new time stamp does not appear unless IFPS is exited and restarted.

Workaround: Exit and restart IFPS.

! **Problem:** Modclimo gives a bus error. (DR 1941)
When the user attempts to use modclimo, it crashes and gives a bus error.

Workaround: None.

! **Problem:** When the user runs modclimo program, it defaults to look for the icwf_crw database. (DR 3081)

Workaround: None. There is no way to override this default. This application is used for configuration purposes. This executable will be completely replaced in Build 5 with a GUI.

! **Problem:** The Tabular State Forecast Product (TSFP) success message is not output correctly. (DR 5082)
When TSFP runs from the cron, the output is captured to $ICWV_LOG/tsfp_script.log. When it executes successfully, it outputs the following line to the log file, "tsfp was successful so change the status file to". This line should contain the successful cycle.

Workaround: None. This has no effect on the product.

2.5 IFPS Product

! **Problem:** The send to AFOS on the file menu is not in FRMT. (DR 2653)
The option to send a product to AFOS must be replaced with distribute_OUP. ICWF currently uses send-to-AFOS and not the standard software module distribute_OUP.

Workaround: None. Use the text workstation to transmit the products.

! **Problem:** Rerun Ingest does not run under ICWF fixit menu in IFPS. (DR 2939)
One of the options for the ICWF fixit menu allows you to rerun the ICWF ingest. When that option is selected, the ingest is not rerun.

Workaround: Re-running the NGM and MRF MOS ingests now work from the product generation menu. If you need to re-run the ETA ingest, please call the NCF for assistance.

! **Problem:** Third try to edit products crashes Product Generation Menu. (DR 4350)
The Product Generation menu has an option that allows the forecaster to edit forecast products before transmitting them. The forecaster is able to edit two of these products by using the

"OK" button on the Edit Products Menu. The third attempt to edit a forecast period results in the Product Generation Menu crashing.

Workaround: The forecaster should use the "Apply" button for each edited product so that the Edit Products Menu will not crash the Product Generation Menu.

! **Problem:** The ccf_trans fails to decode the CCF product if '=' is missing. (DR4937)
The PHLCCFPHL & PHLCCFCTP do not follow the standard format for CCFs by not including the '=' terminator. As a result, ccf_trans does not recognize these products as valid CCFs and aborts the decoding.

Workaround: Either use ICWF to produce the CCF product or when hand typing end the CCF product with '='.

2.6 IFPS Service Area Forecast (SAF)

! **Problem:** Zone Abbreviations and ZFP text are not voice ready. (DR 3974)
Since zone names are used within SAF text and the zone names can be abbreviations (i.e. GRT SALT LAKE VLY), ZFP text is not voice ready. Additionally, the ZFP text contains values like “40-50" which are not interpreted correctly by CRS.

Workaround: The SAF product can be edited before transmission, the invalid phrase can be edited out of ZFP before it is transmitted, or the invalid phrasing can be added to the CRS dictionary.

! **Problem:** Injecting WWA headlines into SAF does not work with one zone/one tower relationship.
(DR 4255)
Sites wished to set-up the zone/tower relationship such that it was one zone per tower. In this configuration, SAF will use the appropriate words for the zone and apply them to the tower. When wwainj attempts to place the WWA headlines in the WRKSAF, it is also using this one zone/one tower relationship. This does not give the full picture of the WWA situation to the users of CRS.

Workaround: None.

! **Problem:** Georemap and SAF do not run correctly. (DR 5596)
This problem may be associated with more than 5 NWR towers in a given WFO area. The problem is in the rcmd_remap program.

Workaround: None.

! **Problem:** Early switching to "ENTIREAREA" tag. (DR 5720)

When deselecting combos for a tower in georemap, if you get down to one combo, then the geo_tag should automatically switch to "ENTIREAREA" (that is, assuming the env var is set). It was found that once you get down to 2 or 3 combos for a tower, all remaining geo_tags switch to "ENTIREAREA".

Workaround: This will likely be a nuisance for forecasters, but it can probably be dealt with by shutting of the auto-switch to ENTIREAREA via the env variable. This variable can be found by searching for NWR_ENTIRE in /awips/adapt/ifps/bin/icwf-<ccc>.env.

! **Problem:** Incorrect handling of deselected combos in SAF updates. (DR 5721)
If you complete the following steps:
1) Deselect 2 combos within georemap and do not merge them with any other combos.
2) Generate SAF.
3) Modify ZFP words for one of the deselected combos, restore the ZFP.
4) Turn the light to green from Zones->NWR.
Georemap correctly highlights the tower icon in the "data change" color. However, the deselected combo's label does not highlight. For a user who doesn't know what changed, this makes it impossible to see what has changed.

Workaround: Do not deselect a combo. Instead merge it with another combo.

2.7 IFPS Terminal

! **Problem:** The weather element order in the TAF is incorrect. (DR 809)
The TAF formatter attempts to set the order of the weather descriptors and intensity elements when the forecaster enters multirole weather elements in the TAF editor. The ordering is not always correct.

Workaround: None

! **Problem:** ICWF- Terminals. (DR 1058)
Within the Aviation Editor, the modification tool is active on the cloud deck. If the forecaster attempts to modify a particular cloud deck by clicking on another icon (i.e., precipitation, fog, etc.), the application will crash.

Workaround: Ensure that modifications are done on the cloud icons.

! **Problem:** Delete Right/Delete Left and surface products. (DR 1059)
Selecting Delete Right or Delete Left and clicking on a surface product, will decrease workstation performance significantly. If the user clicks the third mouse button, the entire workstation will lock up. The user must then completely log out of the workstation.

Workaround: None.

! **Problem:** IFPS - new visibility values are written on top of old values in Aviation Time Line Viewer. (DR 1779)
Select Terminals in IFPS and click on a site ID. In the Aviation Time Line Viewer, there is a button which allows selection of different types of forecasts with choices of PRVLNG, TEMPO, PROB40, and PROB30. Select any of the latter three (TEMPO, PROB40, or PROB30) and choose a visibility value. When a new visibility value is selected, it is written on top of the old value creating an unreadable number.

Workaround: None.

! **Problem:** IFPS TAF Editor Options don't all work. (DR 2183)
The "Update from Grids+LAMP" does not work from the Aviation Terminals Option Menu.

Workaround: None.

2.8 IFPS Watch Warning Advisory (WWA)

! **Problem:** IFPS WWA elevation gridpoints make county names unreadable and borders indiscernible. (DR 2029)
Within the Watch/Warning/Advisory application, two levels of topography are displayed. Defaults for these levels are set as follows: 3000 and 5000 feet. In the Western United States, this causes the entire display to be covered by the topography data.

Workaround: Adjust the default level of topography to something reasonable for the site. The default levels are found in /awips/adapt/ifps/Xdefaults/Wwa_ccc, where ccc equals the 3-letter site identification. There is a comment in the file that reads
"! Topography". This comment is followed by two entries wwa.z1 and wwa.z2. The wwa.z1 represents the lowest topography to be displayed and wwa.z2 represents the mid-level of topography. These two entries need to be changed so that the values are reasonable for the site.

! **Problem:** The WWA test/practice session type TEST banner is formatted in the wrong place. (DR 2773)
The test/practice session type should print a TEST banner after the product header and before the end of the message. It is currently being formatted in the wrong place after being overlooked during development of the segmented product.

Workaround: Change the location of the test banner via the AWIPS text editor.

! **Problem:** The UGCs in WWA are not in collapsed format. (DR 3074)
When the user clicks and holds the third mouse button on a hazard in the WWA Monitor, it shows a list of zones to which hazard applies. The notation for these zones should be collapsed in the same way as the ZFP's UGC line.

Workaround: None. The information is available in non-collapsed format.

! **Problem:** If product is only saved in text workstation, it appears as issued in WWA. (DR 5077)
After creating a WWA product and saving it, the WWA Monitor window changes its status to "issue", regardless of if product sent or not.

Workaround: In the header block, save WWA to a work file.

! **Problem:** The VTEC ID is only assigned to first product in multi-product advisory format. (DR 5117)
After creating WWA products individually, then formatting as one product a VTEC ID is assigned. This VTEC ID should apply to all advisories, but instead only applies to the first advisory. In addition, when a second advisory is formatted, there is no opportunity to associate it with a VTEC ID already in use, instead a new VTEC is assigned.

Workaround: The software works as designed. The only time more than one segment should have the same VTEC ETN is if the hazard is the same and the start and end times are identical. In that case the forecaster needs to "Save Only" on the composer and then "Create Text" after selecting all of the segments off of the WWA Monitor."

! **Problem:** WWA does not always start from the main Startup Menu. (DR 5178)

Workaround: WWA needs to be started from the command line the first time after major system maintenance (for example a cold boot). This seems to set the environmental variables.

! **Problem:** When using follow up, some Calls to Action are not saved. (DR 5196)
In WWA, when using Winter Storm Watch, some of the Calls To Action are not saved to the database. This problem is intermittent. We could repeat it only 2 of 4 times tried. Several products were being formatted at one time when the problem occurred. Following up a single product does not seem to have this problem. Also when formatting the product directly from the WWA Composer window (Save and Create Text as opposed to Save Only, then creating the product from the WWA Monitor window), the problem does not occur.

Workaround: Add any text in the text window before sending the product.

! **Problem:** In WWA, some counties are lost after clearing some counties. (DR 5210)
If a Blizzard Warning and Winter Storm Watch with a common VTEC and one common county are created and sent, the Winter Storm Watch for the common county is canceled. The Blizzard Warning counties not affected by the cancellation are no longer mentioned, and the WWA interface does not display those counties as having any advisories.

Workaround: The workaround is for the forecaster to edit the cancellation to add " A Blizzard Warning remains in effect for the following counties..." This does become a

problem if a third update needs to be created concerning the counties that still have a Blizzard Warning, as a new Blizzard Warning would have to be created or entered manually.

! Problem: In WWA, independent cities are decoded as county from the SEV product. (DR 5525)
GSP reported that a watch was issued by SPC which contained the independent city of Franklin, VA. The independent city of Franklin, VA is not within GSP's WWA "viewing area". Franklin county is on their WWA Geoviewer, and GSP reported that Franklin county was highlighted, despite not being in the watch. It appears that ingest_sev didn't recognize that the independent cities listed in the SEV were cities, and instead it treated them as county names.

Workaround: None.

! **Problem:** There are duplicate WWA sections in AFD. (DR 5581)
While testing the inclusion of Issued & Unissued within the AFD, it was noticed when the command line option "product_issue_statement" equals both issued & unissued, the WWA section of the AFD repeats. For example:

.SLC...
ID...NONE.
UT...HIGH WIND WATCH FOR THIS AFTERNOON FOR ZONES UTZ001>003...UTZ0005>008.
WY...NONE.
.SLC...
ID...NONE.
UT...HIGH WIND WATCH FOR THIS AFTERNOON FOR ZONES UTZ001>003...UTZ0005>008.
WY...NONE.

Workaround: Edit the duplicated section from the wafd.

! **Problem:** wwainj crashes when including only Unissued hazards. (DR 5582)
When the command line option "product_issue_statement" equal "Unissued", the wwainj application crashes. It works fine with this command line option equals "Issued" or "Issued,Unissued". The operational use of this application should have the command line option equal to "Issued,Unissued" or "Issued".

Workaround: None.

! **Problem:** The SLS pil in WWA for western sites does not translate counties to zones correctly. (DR 5893)

The SLS pil does not include all counties for areas that do not have a 1 to 1 relationship of counties to zones. This is primarily found in the West. The SLS pil is county based where as WWA and the SPS pil (used for canceling SLS's) are both zone based.

Workaround: Edit the product manually as needed.

! **Problem:** When generating WWA's and using inter-site coordination the WMO is wrong. (DR 5933)
Viewing the request and receive server logs on ds1, the wmo header is appearing as "LC" which I guess is the last two letters of the entire wmo header used (SLCFFASLC in this case).

Workaround: None. There is no operational impact.

! **Problem:** VTEC can not be turned off from WWA_setup menu. (DR 6101)
VTEC entries can not be deleted from the appropriate WWA_setup window due to a script error. Part of the error message is, "(vtec_phenom, vtec_sig)=(NULL,') Found a quote for which there is no matching quote".

Workaround: Use dbaccess from a telnet window to change the vtec_phenom and vtec_sig columns to empty strings "" within the characteristics table in the wwa_ccc database, where ccc is your site id.

2.9 IFPS Zones

! **Problem:** Steady temperature traces after significant adjustments to max/min temperatures. (DR 1656)
If the user adjusts the maximum temperature so that it goes lower than one or more of the 3-hour temperatures, the resultant 3-hourly temperature trace will be equal to the adjusted maximum temperature (i.e., steady temperatures). In the same manner, if the user raises the minimum temperature above one or more of the 3-hour temperatures, the resultant 3-hourly temperature trace will be equal to the adjusted minimum temperature.

Workaround: None.

! **Problem:** Measurable precipitation is left out when drizzle has a higher probability. (DR 3253)
When you select within PCPN1 occasional (o) drizzle (L), within PCPN2 chance © rain showers (RW), Detail Level 1, the phrase “CHANCE OF RAIN SHOWERS” was not generated in the ZFP.

Workaround: Edit the ZFP by hand to get the phrases you want.

! **Problem:** ZFP uses the term “county” which is inappropriate for certain Western Region NWR products. (DR 3975)
The SAF and certain zone based WWAs use the term “county” to describe geographical areas. This term does not work in the Western Region where zones do not necessarily equal counties (or sub-counties).

Workaround: Use the search/replace feature of the text editor to replace “county” with an appropriate term.

! **Problem:** ZFPs with "Weather Channel" forecast periods are not captured. (DR 4940)
Some sites have begun putting a "REST OF..." period in as the first ZFP period. For the second period, they omit the "." in front of the period name in order to get The Weather Channel to display enough forecast periods. This causes two problems in IFPS. The capture_off_words.bat keys on the period name to determine which cycle the ZFP belongs to and "REST OF THIS AFTERNOON...", used with the 12Z package, is being stored in a 00Z table. The second problem is the period without the "." is not recognized as a forecast period, and therefore won't be formatted correctly.

Workaround: None.

! **Problem:** While using play buttons, data can be edited, but edits do not take effect. (DR 5047)

Workaround: Stop and restart play, and the edits will take effect.

! **Problem:** IFPS - Interactive Combo Selector should have a recommended combo map. (DR 5174)
ICS should recommend a combo map according to the current run. Currently it does not.

Workaround: None.

! **Problem:** IFPS - Transfer of data from Zones to Grids does not work. (DR 5175)
Data can not be transferred from Zones to Grids using the Go button or the Green light.

Workaround: None. However, this is a very uncommon use of this application.

! **Problem:** Global edits do not work unless parameter is displayed. (DR 5238)
In Zones, the parameter being edited using Globals must be displayed either in the small or large matrix in order for it to take effect. This problem is intermittent.

Workaround: Bring up the large matrix or be sure your parameter is displayed in the small matrix.

3.0 HYDROLOGY

3.1 HydroBase

! **Problem:** HydroBase Crashes When County/Zone UGC is Edited. (DR 3893)
HydroBase allows the user to add and remove counties with which a gage is associated. This is done through the County/Zone UGC window accessed under the Location menu. When adding counties from the Available list, HydroBase sometimes crashes. This was noted when trying to add a second county to a test station in the STR database. When testing as SLC, HydroBase did not crash until the tenth county was added. Also, HydroBase crashes if, after adding all the counties in the Available list all at once, the user selects them again and adds them. It was noted that if 'Ok' is selected immediately after adding a county and HydroBase crashes, the county is still added to the database.

Workaround: Add a few counties at a time to a station. If HydroBase crashes for a given set of counties the user can reenter a subset of the counties after restarting the application. This problem is intermittent and sometimes HydroBase will work the second time after the same set of counties is added. This HydroBase function is rarely used because the county information is very static, and is usually set once during initial site configuration. Once the county information is entered all other HydroBase functions can access it properly.

3.2 HydroView

! **Problem:** Incorrect dates displayed in WHFS HydroView Station Reporting Status window. (DR 5281)
The Hydroview Station Reporting Status window allows users to generate a list of locations in the IHFS Database for which there has never been any observations reported. The tabular display includes a column for the Location ID, a column for the Observation Time, and a column for the Time Latest Data Received. For those locations which have never had any observed data reported, the two time columns should be blank. However, the date/time 2001-01-01 00:00:00 is appearing in these two columns.

Workaround: None. Ignore incorrect datetimes.

3.3 National Weather Service River Forecast System (NWSRFS)

! **Problem:** NWSRFS IFP does not display colors as designed when alert request window is up. (DR 4240)
When running NWSRFS IFP on a monitor that an Alert Request window is displayed, the NWSRFS IFP window sometimes does not display the colors as designed. This makes some data in the application unreadable for the user. This was noted in the Forecast Group Topology window (found at the beginning of the application after loading data) and also the IFP Plot window. This may be a problem in other windows too.

Workaround: This is a color-contention problem. Close the alert window and restart NWSRFS IFP. Minimal operational impact.

3.4 RiverPro

! **Problem:** Extra characters in RiverPro products. (DR 915)
There are extra characters when viewing saved and issued products. Using the RiverPro editor, create and save a product, then issue the product. When viewed using the previous Product Information window, there are extra characters at the end of the message. When the same product is viewed using the editor, the characters are not present.

Workaround: Ignore the extra characters. They are not in the transmitted product.

! **Problem:** End line may be removed in RiverPro products sent over NWWS. (DR 4288)
RiverPro normally has two blank lines at the end of a product. When testing using an NWWS simulator, it was observed that if a user edits the product such that the last of these blank lines has edited text, the edited text may be dropped from the product at the NWWS simulator. It is unclear at this time whether this problem occurs only with the NWWS simulator, or if the problem also occurs using live NWWS uplink.

Workaround: If this occurs, the user can try adding more blank lines at the end of RiverPro products if editing the end of the product, to avoid having the edited text being dropped at the NWWS.

3.5 Weather Forecast Office Hydrologic Forecast System (WHFS)

! **Problem:** The metar2shef process does not decode the T group in the METAR Remarks section when the T group is the last on a line. (DR 4971)

Workaround: None. The decoder will take the temperature and dew point from the main body of the METAR. These temperatures and dew points will sometimes be off by one degree Fahrenheit since they are in whole degrees Celsius.

! **Problem:** Hydro fails to purge all metar2shef log files. (DR 5110)
When the metar2shef translator generates errors, it puts looperr* files into the /awips/hydroapps/whfs/local/data/log/metar2shef directory. Even though metar2shef is in the OH purge_files script, these files are not purged.

Workaround: The looperr* files occur very rarely and will not take up much space. They can be deleted manually if desired.

4.0 LOCAL DATA ACQUISITION AND DISSEMINATION (LDAD)

4.1 LDAD Administration

! **Problem:** LDAD Monitor Restart Processes "Not Found" condition. (DR 2268)
If a user inputs a valid name and password for the admin function of LDAD Monitor, but that user (awipsusr) is not authorized to perform admin functions, Netscape reports a "Not Found" error (If an invalid username/ password is entered, then the user is prompted to try again). Once a failed attempt to enter login and password for the LDAD monitor Admin and Restart Processes functions occurs, and the user is displayed the "Not Found" error, the user must completely exit netscape and restart the monitor in order to retry. Any subsequent selection of these capabilities within the same failed attempt session will forward the user to the "Not Found" notification.

Workaround: Type an "f" after as1 in the URL at the top of the Netscape window - making it as1f - then hit Enter. This will allow the user to enter the correct (ldadAdmin) username and password, though subsequent selections will still result in the Not Found message - adding the “f” will work again.

! **Problem:** The NCF can not access the ls1 console port from AWIPS with out knowing the ltserv ip address. (DR 5095)
The NCF can not access the ls1 console port (when the LDAD server is not completely up) with out knowing the IP address of the ltserv (LDAD terminal server). This is a problem since the NCF may not be able to get in contact with a person that knows the ltserv ip address when they need to correct an ldad server problem using the console port (for example, when HP is servicing hardware).

Workaround: Add the ltserv ip address to the LDAD firewall's /etc/host file so that the NCF would not need to know the ip address of the LDAD terminal server..

4.2 LDAD BBS Interface

! **Problem:** LDAD BBS download requires both UNIX account and LdadScheduler user. (DR 2470)

Workaround: Ensure that a UNIX account for BBS has a matching LdadScheduler user setup with a protocol selected in the protocol selection area. If a mismatch exists, the error referencing /ldad/bin/sz permissions will be displayed to the external user attempting to download data.

! **Problem:** Xmodem and Ymodem BBS download adds extraneous characters.
(DR 3605)

While using the LDAD BBS X and Y modem protocols, extraneous characters are added to the downloaded files. The extra characters are added at the end of the file.

Workaround: Use Kermit or Zmodem protocols for download.

! **Problem:** Problems occurring during downloads using Zmodem protocol in LDAD BBS. (DR 4089)
When using the Zmodem protocol to download in the LDAD BBS, the product requested is downloaded from the LDAD server as well as other products that are in the BBS menu. The product that is requested gets downloaded first, then the cursor will go to the next product listed in the menu and download that product. This process repeats multiple times.

Workaround: None. This causes no problems but is confusing.

! **Problem:** Zmodem incorrectly identified as user protocol. (DR 4237)
Users with a protocol of Kermit, xmodem, or ymodem appear to change from their respective protocols to zmodem after a zmodem user has logged into the bbs.

Workaround: Re-save the user information.

4.3 LDAD Configuration/System

! **Problem:** LDAD External processes occasionally exit. (DR 2534)
All the external LDAD processes, with the exception of the co_serv process, will occasionally (about once per week) exit with no logging of any cause or problem.

Workaround: The processes may be restarted from the Admin or Restart links off the Internal monitor in Netscape.

! **Problem:** The external LDAD webserver should not allow users to access directory listings of the ldad server. (DR 2236) **Refer to User's Manual Section 11.3.2**
The external LDAD webserver is setup to allow users access to a directory listing within the document and ldadmon/bin directories.

Workaround: Put a dummy default home page in each of the directories to be protected. The dummy default home page should be named "index.html" and can be just a minimal html document (e.g. <html><body>Access denied</body></html>).

! **Problem:** LDAD storage of Netcdf and Plot files consumes a considerable amount of CPU time. (DR 3888)

Workaround: None. The Plot files have been removed.

! **Problem:** The LDAD server is not (time) synchronized with the Data Server. (DR 4390) Some LDAD products depend on the LDAD Server time stamp to be accurate and could lead to misinformation on ingested LDAD products.

Workaround: Modify the date on the LDAD server manually using the date command if the server gets out of time synch. Or, you may set up the following processes to insure that the LDAD system is synchronized.

This problem does not affect ingested LDAD products. There is no time-dependency between the LS and DS with respect to these products. However, there is a time-dependency with regard to log files of certain products. When the daily logs are broken on the DS, the logs are also broken on the LS. If the LS is not time-synced with the DS, it is possible that logs on the LS will not be put in the correct (new daily) directory. This was observed with the sua process on the LS. There may be other time dependencies between the LS and DS as well.

The internal AWIPS systems are currently time-synced by setting up the AS as a time server, which gets the correct time from the NCF, and broadcasting this time to the AWIPS LAN. Any AWIPS host which is set up as a broadcast client can then sync to this time. For example, DS1 is set up as a broadcast client.

The solution for this DR is to set up the LDAD firewall (gateway) as both a broadcast client on the AWIPS LAN (using the internal interface) and a broadcast server on the LDAD LAN (using the external interface). The firewall thus acts as a relay of NTP broadcasts from the internal side to the external LAN. The LS must then be set up as broadcast client to sync with the NTP broadcasts from the firewall. This time-syncs the LS with the internal AWIPS and treats the LS as an NTP client of the AS (as is the case with all other internal AWIPS hosts).

Sites should perform the following procedures on the LDAD firewall (gw), the LS (ls1), and on the internal DS (ds1). These procedures were checked out on NHDA, NMTR, and NMTW at NWS HQ. Note that the procedures use NHDA as an example, so sites must replace any reference to 'nhda' (nhda addresses) with their own site name (site addresses).

A. Procedures for the LDAD firewall (gw or gateway) —

This assumes everyone is running the BSDI BSD/OS 3.0 kernel, and if not, that your BSD system will accept the following changes (most likely).

1. Be sure /etc/hosts file contains entries for as1-<site>, as2-<site>, and ds1-<site> (use your own site name).

2. Check /etc/services and be sure that the line for ntp contains the aliases xntpd and ntpd, as follows:

```
ntp     123/udp  xntpd ntpd     # Network Time Protocol
```

(Note: not strictly necessary, but makes it explicit.)

3. Ensure that ntpdate and xntpd are set up to be executed by the boot script /etc/rc. By default, they should be.

4. Put the following entries into the /etc/ntp.conf file:

```
broadcastclient     165.92.21.127
broadcast           140.90.91.255
server              165.92.21.1  prefer
server              165.92.21.5
```

These are the only entries in this file.

The entry for 'broadcastclient' uses the broadcast address of the internal AWIPS LAN. 'broadcast' uses the broadcast address of the external (LDAD) LAN. The preferred 'server' uses the address of as1-<site> and the second 'server' entry uses the address of ds1<site>. The 'server' entries are used on boot-up of the gateway. Each site should verify those addresses. So, the firewall listens for NTP broadcasts from AWIPS and broadcasts them out to LDAD.

5. Add a root cron to the gateway which restarts the local ntp server daily and just before the logs are broken on the DS.

   a) Create a script called 'ntp.restart' in the directory /etc. Put the following lines into this script:

```
#!/bin/sh -
pid=`ps -x | grep -v grep | grep xntpd | awk '{print $1}'`
[ -n "$pid" ] && ( kill $pid; sleep 2 )
/usr/contrib/bin/ntpdate -bs as1-<site> as2-<site> ds1-<site>
sleep 2
/usr/contrib/bin/xntpd
```

   (NOTE: Be sure the script is executable.)

   b) Edit the file /etc/crontab. Put the following line near the top of the file and just below the line that executes 'at':

```
32 18 * * * root /etc/ntp.restart > /dev/null 2>&1
```

   This will execute ntp.restart daily at 1832. The firewalls are on local time. The values should be set to a local time that will be before

midnight GMT. Adjust this for the site's own time (try to offset the time from existing cron processes).

You can verify that the cron is working by viewing the file /var/log/messages and searching for ntpdate.

B. Procedures for the LDAD server (ls or ls1) —

1. Ensure that the file /etc/rc.config.d/netdaemons has defined the following variables:

   NTPDATE_SERVER="gw-<site>"
   XNTPD=1

   Sites will use their own name for their firewall (be sure that this name is in the /etc/hosts file).

2. Ensure that the file /sbin/init.d/xntpd executes ntpdate with the "-b" option.

3. Put the following entry into the /etc/ntp.conf file:

   broadcastclient yes

   The entry for 'broadcastclient' tells the ntp daemon to listen for ntp broadcasts (which will be sent by the firewall). This is the only entry that is needed in this file.

C. Procedures for the DS server (ds1 on the AWIPS LAN) ---

Not much to do here since everything should already be set up. Just perform some checks.

1. Ensure that the file /etc/rc.config.d/netdaemons has defined the following variables:

   NTPDATE_SERVER="as1 as2"
   XNTPD=1

2. Ensure that the file /sbin/init.d/xntpd executes ntpdate with the "-b" option.

3. Be sure the following entry is in the /etc/ntp.conf file:

   broadcastclient yes

The entry for 'broadcastclient' tells the ntp daemon to listen for ntp broadcasts (which will be sent by the AS). This is the only entry that is needed in this file.

D. Final procedures ---

After performing the above actions, do the following checks:

1. Be sure that ds1 is in-sync with as1. If not, manually run ntpdate to as1 to sync.

   Restart xntpd on ds1.

2 Be sure that gw is in-sync with as1 and ds1. If not, manually run ntpdate to as1 to sync.

   Start/Restart xntpd on gw.

3 Be sure that ls1 is in-sync with gw. If not, manually run ntpdate to gw to sync (or manually set date).

   Start/Restart xntpd on ls1.

! **Problem:** LDAD processing problems may result after a failover from DS1 to DS2. (DR 4527)
If a file is being transferred through LDAD at the time that a failover from DS1 to DS2 occurs, a socket may become locked. This causes the routerStoreNetcdf process to run out of control, and stops acquisition of LDAD data.

Workaround: Either kill the socket process or reboot ls1. The execution of one or both of these actions will restore data acquisition.

! **Problem:** LDAD monitor logs going to wrong directory. (DR 5228)
The LDAD monitor logs are being written to 2-digit-year directories instead of 4-digit.

Workaround: None. However, this has no operational impact.

! **Problem:** When modifying a file using LDAD admin, its log is not put in /data/logs/ldad. (DR 5244)

The ldadAdmin log is being written to /awips/fxa/htdocs/ldadMon/logs. It should be written to /data/logs/ldad. This is so that the NCF and other maintenance personnel will have an easier time finding logs and so that the /awips/fxa partition does not get filled up.
Workaround: The work around is to use the ldad monitor admin function to modify the following line in /awips/fxa/ldad/data/ldadAdmin.conf:
LOGDIR | /log
should be changed to:
LOGDIR | /data/logs/ldad

! **Problem:** LDAD suaReceiver logs are not breaking. (DR 5269)
The LDAD cronjob on the LS does not break the suaReceiver logs. The problem is that the suaReceiver will continue to write to the same log directory, based on the date it was started. It will eventually not have a log to write to when the directory is purged.

Workaround: The work around is to modify /ldad/bin/breakLogLDAD.ls. Add the following line:
kill -USR1 `UNIX95=XPG4 ps -o pid="" -C suaReceiver` >/dev/null 2>&1

! **Problem:** Two "Thank You" messages appear when modifying LDAD config files through Netscape. (DR 5323)
When editing and saving ldad configuration files through the ldad administration section of Netscape, two "Thank You" messages are displayed instead of 1.

Workaround: None. This is very minor and only a cosmetic problem. Functionality is not affected.

! **Problem:** LDAD firewall has a default timezone of EST instead of GMT. (DR 5374)
The LDAD firewalls (I believe all but I've only checked 4) are set to EST but should probably be set to GMT.

Workaround: None. There is no affect to AWIPS so this is a minor problem but for monitoring purposes some sites have requested a change to the timezone since the time zone difference is confusing and adds an addition bit of complexity to the firewalls logs.

• **Problem:** The LDAD listener is being killed by the breaklog instead of just creating a new log file. (DR 5375)
The LDAD listener is being killed by the LDAD breaklog cronjob run at 0Z. However, the purpose of the breaklog is just to start a new log when the date changes.

Workaround: None. A new LDAD listener starts, and no data are lost.

! **Problem:** The preprocessRRS process writes to multiples logs. (DR 5887)
Every time preprocessRRS.pl is invoked it generates a separate log file. This makes tracking of products very difficult.

Workaround: The logged information is in the separate log files.

4.4 LDAD Fax

! **Problem:** LDAD Fax Message GUI Recipient allows overwrite of the Company field. (DR 4125)
The LDAD Fax Message GUI allows for 36 characters in the recipient field. When the entire field is used the Company header of the fax cover sheet will be overwritten. This makes the last 9 characters of the Recipient field and the Company header on the fax cover sheet unreadable.

Workaround: Limit the number of characters used in the recipient field to 27.

! **Problem:** LDAD Fax Site Viewer and Editor GUI generates TCL invalid command stack trace. (DR 4203)
When a user selects Contents from the help menu of the LDAD Fax Sites gui (Configure Auto Fax button menu), it generates a stack trace. Error: invalid command name "win_setCursor". This button works from other fax window help menus, but is not really useful since the help page that appears does not have any help on using the fax functionality.

Workaround: Bring up the Fax All menu and use its help menu.

4.5 LDAD Ingest and Display

! **Problem:** Hourglass cursor not displaying while LDAD data is loading. (DR 3020)

Workaround: None.

! **Problem:** The Kermit collection and dissemination session templates are missing. (DR 4147)
There are no sample kermit session templates. After creating a blank session file for a kermit collection or dissemination, there were no templates to use. For example, using xmain a user creates a user collect1 and a session file collect1_coll_sess and then the user copies ~ldad/data/XMTEST_COLL to ~ldad/data/collect1_coll_sess (for a Xmodem session). For kermit collection and dissemination there are no templates. There are only two differences between the xmodem templates and what a kermit session file needs to be:

```
diff KERMIT_COLL XMTEST_COLL
< send "kermit -s <N>\r"
> send "sz -ev <N>\r"
< spawn kermit -r; set localId $spawn_id
> spawn rz -v; set localId $spawn_id
diff KERMIT_DISSEM XMTEST_DISSEM
```

< send "kermit -r \r"
> send "rz -v \r"
< spawn kermit -s <N>; set localId $spawn_id
> spawn sz -ev <N>; set localId $spawn_id

Workaround: None.

! **Problem:** LDAD can only collect data from the home directory on remote system. (DR 4163)
When attempting to collect data via the LDAD Scheduler using the protocols X, Y, Z modem or kermit, the home directory of the user specified is the only directory on the remote machine that is available for collection. This problem is related to an incorrect session template file.

Workaround:
(1) In the Acquisition session file perform the following:
Before the line that does the send on client system
(e.g., send "/usr/local/bin/sx <N>\r") - enter the following:
send "cd remote_directory_name \r"
(2) In the Dissemination session file perform the following:
After the line that does the receive on client system (e.g., send "/usr/local/bin/rx\r")
enter the following line: send "cp <N> destination_directory_name \r".

! **Problem:** Baseline tests Kermit, Xmodem, Ymodem, and Zmodem files need updating. (DR 4167)
The baselined test session files do not work. The baseline contains XMTEST_COLL, XMTEST_DISSEM, YMTEST_COLL, YMTEST_DISSEM, ZMTEST_COLL, ZMTEST_DISSEM and the ID of the Kermit baseline file is unknown. These files are incorrect in that they are missing some full path names due to insufficient environment, and missing variables and slashes necessary to support the database user entries.

Workaround: None.

! **Problem:** Errors occur when editing the ROSAsiteInfo.txt file. (DR 4375)
An error can occur when editing the ROSAsiteInfo.txt file in which spaces are added to the end of the lines. This will cause an error because the software is designed to read the PIL from the end of the line. If a space appears at the end of the line, then the full AFOS PIL will not be read.

Workaround: Make sure that no extraneous spaces are present at the end of all valid data lines.

! **Problem:** LDAD: dew point is not displaying for local data plot (mesonet). (DR 4995)
Dewpoint data is not displaying on D2D. However, it is being put in the netCDF file. This was noticed during testing of RAWS data.

Workaround: None. This problem will be addressed in a future release.

! **Problem:** ROSA DTMF data is not fully distributed or archived. (DR 5003)
The pre-processor provided with the 4.3 system for ROSA DTMF data prevents the site from utilizing co-op/ROSA data fully. It only writes the data to the text databases. It should also send it on to the NCF over the WAN and to AFOS when the site is in pre-commissioned mode, and archive it.

Workaround: There are 2 possible workarounds for this. The first is to use PC-ROSA as was demonstrated during 4.2 OT&E, per instructions from OSO. The second is to use a new pre-processor (preProcessDTMF.pl) developed by the APO for local use at Burlington, Vermont (BVT). For more information on where to obtain a copy of preProcessDTMF.pl, and necessary changes to LDADinfo.txt, please contact the SST.

! **Problem:** LDADScheduler status window displays spurious characters. (DR 5021)
The status window that displays data that is received from a one-time request will actually display junk (null characters) along with the actual data.

Workaround: None. This is a cosmetic problem and doesn't limit any functionality.

! **Problem:** LARC session file references are incorrect in gageinfo. (DR 5029)
LARC uses session files that are referenced in gageinfo to collect data from sites. The data that is being retrieved from the sites in most cases is different from the data that the session files are attempting to retrieve. Sites that use the HANDAR_coll_sess_2 session file are supposed to send Rain gauge data but are sending River Stage data (HANDAR_coll_sess_1) instead. The data is being labeled in the status window as Rain gauge data when in actuality it is River Stage.

Workaround: None. AWIPS will still process the data correctly and store the data in the correct place.

! **Problem:** LDAD: preprocessRRS.pl does not handle the new Radiosonde Replacement System (RRS) data file name format or specials. (DR 5094)
The RRS preprocessor (preprocessRRS.pl) does not account for the new data file name format. The preprocessor expects the AFOS id to be part of the RRS data file name. Also special products fail because there is no space inserted before the -w option (or after -d DEFAULTNCF).

Workaround: The sites are responsible for preprocessors and this is a perl script that sites can modify to work correctly once RRS is available.

! **Problem:** routerShefEncoder calls distributeproduct but does not send to the WAN. (DR 5358)

Some products can not be sent to the WAN successfully using the routerShefEndocder. LARC products work, but not others.

Workaround: None.

! **Problem:** LDAD: doesn't collect data from certain LARC gauges. (DR 5379)
Some LARC gages are not owned by the NWS. These gages have 2 different identifiers: one for the NWS, (HB5ID) and one for the agency that owns and operates the gauge. Example: LOWN7 (NWS) aka 2145000 (USGS). When collecting data from these gauges they identify themselves to LDAD as the non-NWS id, which doesn't match the NWS id entered in gageinfo. This causes the expect script to timeout and no data is collected. Unfortunately if we change the LDAD id to match the non-NWS id, HydroView doesn't recognize the gauge.

Workaround: None.

4.6 LDAD ROSA

! **Problem:** LDAD distProduct.pl assigns incorrect AWIPS site id for ROSA data.
(DR 4436)
The distProduct.pl file creates an AWIPS id by using the AFOS id (argument) and pre-pending it with a "K". It then passes this value as an argument to distributeProduct. The problem is that sometimes it may create an incorrect AWIPS ID, and the correct ID may not always begin with a “K”. The code should use the afos2awips.txt file to assign the AWIPS id. This may not cause any problems though, as the ROSA entries in LDADinfo.txt are examples only and must be edited by a site collecting ROSA data, and some sites may opt to not even use distProduct.pl in the first place.

Workaround: None.

! **Problem:** Incorrect time zone appears in SHEF-encoded ROSA data. (DR 5180)
When an observer entered ROSA data using the DTMF box, he first identifies himself (user id) and enters the date/time. When he enters a real date/time, the result is that the entered observational data is stored in LDAD (/data/Incoming) with the incorrect time zone field. The ROSAStation.txt file contains the time zone field. It appears that the ROSA_Acq process extracts the fourth character in the time zone specification. In the case of Burlington, the time zone is EST5EDT. Consequently, products stored to file contained a "5" rather than "E" in the time zone field. For example, for the product ALBRR3BTV, the observation would appear as follows: .A WAIV1 1109 5 DH0730/TX 33/TN 23/TA 28/PPP 0/SF 0/SD 0/XW 03

Workaround: The workaround implemented at Burlington, VT was to modify the time zone field stored in ROSAStation.txt from EST5EDT to ESTE (or ESTEDT).

4.7 LDAD Scheduler

! **Problem:** Error Message in LDAD Scheduler. (DR 3870)
An error message is being displayed within the LDAD Scheduler when the New Request button is selected. The error message reads "Error: can't read "ldad_data (validGauges)": no such element in array." This error message only appears when there are no existing requests in the scheduler.

Workaround: Press the left mouse button in the background of the scheduler to "activate" the window before selecting New Request.

! **Problem:** Multiple users appear in the LDAD Scheduler. (DR 4008)
When creating users during testing, the users appeared in the LDAD Scheduler twice. This occurred only for the users used for dissemination. The extra instance of a user on the LDAD Scheduler seems to be created when an additional session file is created or when a user is converted to a dissemination user from a collection user. A maximum of two instances of a user has been observed. This is also a problem when a user's session file is removed, the ldadScheduler still lists the user.

Workaround: None.

! **Problem:** Scroll bar error in LDAD Scheduler. (DR 4121)
When a user selects a large number of requests to be active and exceeds the size of the active request window, the scroll bar does not allow the user to view all the products.

Workaround: Select one of the green book icons next to the individual request. This will show the contents of the request and forces the scroll bar to resize so that all requests can be seen.

! **Problem:** Could not get XYZ-modem dissemination to work from the LDADScheduler. (DR 4209)
The impact is that a user will only be able to use ftp or kermit to disseminate with the LDAD Scheduler.

Workaround: Use the BBS, which does allow XYZ-modem protocol dissemination, but cannot be scheduled.

! **Problem:** The LDADScheduler kicks off a co process that can not write to it's log. (DR 4854)

The ldadScheduler process kicks off a co process as fxa, but the /data/logs/ldad/<date> directory is not writeable by anyone but ldad. This produces an error and prevents a log from being created.

Workaround: Users are not likely to notice this problem. If desired, one may use the chmod command to change the permissions of /data/logs/ldad/<date> at the beginning of each day to allow fxa to write to it.

! **Problem:** Session files missing from list when editing users. (DR 5076)
When creating new users within the LDAD Scheduler, there is a button to choose a session file for that user. The button will display only an assortment of the possible user session files and leave out many of the others (ds:/awips/fxa/ldad/data).

Workaround: Manually type in the name of the session file and the user will be able to edit the file.

! **Problem:** LDAD dissemination and collection writes to /var/tmp/null. (DR 5160)
When the ldad scheduler is used it kicks off scripts on ls1 that write to /var/tmp/null. /var/tmp/null does not initially exist on ls1 so it becomes a file that is only purged on a reboot. It is added to on every ldadScheduler request (collection, dissemination, LARC) but is never purged.

Workaround: It has currently not caused any problems but it could eventually fill up /var on ls1. For 4.3 (DR 5147), a link to /dev/null from /var/tmp/null was created.

! **Problem:** Collection of files using x,y,and zmodem protocols place extraneous characters in the files. (DR 5162)
When collecting data files using xmodem, ymodem, and zmodem protocols through the LDAD Scheduler, extraneous characters are placed at the end of the files that are collected. In particular, a string of ^Z 's appear at the end of these files.

Workaround: There is no definite workaround, but sometimes an edit tool (i.e. wordpad) can be used to remove the added characters.

4.8 LDAD Triggers

! **Problem:** The LDAD triggers template is too restrictive. (DR 4865)
Several Entries in the LDAD triggers template don't create useful PILs when matched with the ldadSiteConfig.txt directives. For example, in the QC products (00nQCa), the XXX matches the local site ID, while the directive ww1 used in the template may use the AFOS node for other reasons.

Workaround: Users need to go in and edit their triggers. This is described in Section 3.2.3 of the Triggers write-up, http://www-sdd.fsl.noaa.gov/~fxa/doc/triggers.html.

! **Problem:** The LS is locking up requiring a manual reboot because of too many triggers. (DR 5288)
At BUF and VUY the LS has locked up and been inaccessible without a manual reboot. Too many remsh and/or too much memory was being used on the LS. The hmingest process, the listener process, and/or the LS may not have been able to handle the amount of data to be proceesed. According to /awips/fxa/informix/fxatextTriggerActions.txt over 200 ldad triggers existed - of which around 20 incorporated wildcards.

Workaround: Lessen the number of LDAD triggers.

5.0 SYSTEM

5.1 Asynchronous Product Scheduler (APS)

! **Problem:** APS process dying frequently at certain sites. (DR 4512)
The Asynchronous Product Scheduler process was observed to fail frequently at some sites in R4.2. This DR was subsequently canceled due to the following:
The APS provides support for connectivity of external devices such as PCS and printers. APS is software flow control enabled so any external device that transmits data to APS must also be software flow control enabled in order to guarantee the preservation of data integrity.
In addition, any external device that receives data from APS must use software flow control to preserve the integrity of data received from APS. In the case of slow dot matrix printers with small amounts of internal memory for buffering data (specifically EPSON FX-80 models), it has been found that these mechanically inefficient devices cannot ingest and process data transmitted from APS quickly enough. Depending on the amount of data sent to one of these models of printing devices, problems could occur due top a buildup of pending data transmissions in APS. Such a build up could cause APS to use up all of the memory in its process space. This can cause the APS process to halt or crash. The following measures (or some combination of these measures) should be implemented to reduce the chances of this happening:

< Limit the number of products/total bytes of data sent to a printer
< Distribute products sent for printing among multiple printers.
< Increase the memory buffer size of the printer(s)
< Upgrade to a faster printer

Due to variation in site configuration, product loading and printer resources, it may be necessary for a site to experiment with the APS to determine the limitations with any individual printer and adjust accordingly.

! **Problem:** A core file is created when async Scheduler is stopped. (DR 5123)
A core file was created when Async Scheduler was stopped that was about 3M in size and was located in /data/fxa/workFiles/asyncProdScheduler. A cma_dump.log file is also created which mentions thread problems. This core file does not get created every time async Scheduler is stopped but has been seen numerous times.

Workaround: The core file does not seem to have an effect on performance. The user will be able to run startAsyncScheduler even with the core file around.

! **Problem:** Configuration of aps_line.tbl can cause APS not to process incoming PILs. (DR 5185)
At times APS has stopped processing any data.

Workaround: The problem may be able to be fixed by changing the order of the ports in the aps_line.tbl. Furthermore, when only 1 line is active this problem seems to disappear. The more active lines, the worse the problem gets. No pattern for line configurations in the aps_line.tbl that is guaranteed to work has been determined. However once a working configuration has been determined, APS seems to run without any problems.

! **Problem:** Failed calls to distributeProduct result in error msg sent to the screen. (DR 5365)
When receiving a product that isn't listed in the afos2awips.txt file, the APS erroneously attempts to invoke distributeProduct with bad arguments. Thus distributeProduct fails (as it should if called with bad arguments), and outputs the message instructing proper usage in the asynchScheduler log.

Workaround: None. The asynchScheduler log will have a little more information than necessary.

! **Problem:** The asyncScheduler start script does not return success or fail. (DR 5464)
The start script for the asyncScheduler process does not provide a return status that reflects the successful or unsuccessful invocation of the process. It just exits with an error code.

Workaround: None.

! **Problem:** In APS NNNN appears twice on some products. (DR 5841)
Logs revealed that, in a 21 hour period, there were about 30 instances of products being transmitted out the comms port with an extra set of "NNNN"s. APS received the products from the textDB with "NNNN" already on them (but no "ZCZC" header) and the APS automatically appends "NNNN" no matter what is in the text of the product.

Workaround: None.

! **Problem:** APS sometimes fails to write the complete product to a port. (DR 5906)

Sometimes, on systems where APS is particularly busy (i.e. there are thousands of products in the aps_pil.tbl), APS will fail to write the complete product to a port. The error message appears as follows:

17:08:52.536 AsyncPort.C EVENT: Failed to write requested number of bytes.
17:08:52.537 AsyncPort.C PROBLEM: Interrupted system call
17:08:52.538 CommsLine.C PROBLEM: PQ-Line:5:Write-Thread failed writing to port

The result is that the product is not completely written out to the port.

Workaround: If this problem is noticed, send the product again. This problem has only been observed on a couple of sites thus far, but could potentially be a problem for any site. On SEW, the problem appears to occur up to several times a day, although the incidence of occurrence is still relatively low considering the total number of port writes that are attempted.

5.2 Decoders

! **Problem:** Maritime decoder does not decode coast guard reports. (DR 3697)
These reports are used by the Hourly Weather Roundup in Build 4.2, and will be used by other marine products in Build 5.0.

Workaround: None.

! **Problem:** Descriptor 0 error in the Raobbufrdecoder log. (DR 4029)
In the RaobBufrdecoder log, a message is frequently observed:

dataFill.C EVENT:
nstored descriptor: 0

This message is simply the result of a variable not getting initialized until after the error message is printed. There appears to be no ill effect with products still getting stored, but the message is misleading and consumes CPU time.

Workaround: None.

! **Problem:** LightningPlotInventory acquisition has a logic flaw. (DR 4519)
The constructor for the LightningPlotAccessor class uses a time range to obtain CG lightning data. It uses the LightningPlotInventory class to get the valid inventory from that time range. However, if that time range overlaps the hour (ie: 1358 to 1404), the function LightningPlotInventory::numRecords() will fail to count ANY lightning data. It fails because it uses the minutes as a loop variable, but when the end time minutes (04) is less than the start time minutes (58), the loop is never entered. So, the condition when the end time minutes is less than the start time minutes must be handled.

Workaround: There is a small chance of losing lightning data at the top of the hour. This is unlikely because no data selections are currently on D2D cross hour boundaries.

! **Problem:** Text product NMCFTPNW is not being stored. (DR 5056)
The text writer log indicates a traceback. The product appears to be model guidance data.
Workaround: None. Numerous other products starting with NMCFTP do store successfully, as does another version, SLCFTPWR.

! **Problem:** Maritime Decoder intermittently crashes. (DR 5079)
The Maritime Decoder has been observed to intermittently crash on all the PRC test platforms. The decoder seems to decode at least some of the product, but then crashes with a segmentation violation. The decoder crashes at different times on different systems - the decoder might crash on one system, but on the others the same product will be decoded successfully. In some cases, the log says that the product was decoded and deleted before the crash, other times the crash happens in mid-processing. Sometimes the product is written to Bad, but in at least one case, the decoder said the product was written to Bad, but in actuality it was not. When the decoder came back up, it proceeded to decode the product that it had just crashed on successfully.

Workaround: None. In all cases the decoder has successfully restarted, so there should be little impact.

! **Problem:** Swell height and swell direction are not decoded by the Maritime Decoder. (DR 5111)
Three fields that are encoded only for ship reports are not being decoded by the current maritime decoder: the swell direction (of the predominant swell), the swell period, and swell height. These items are encoded in Section 2 (marine data) of the ship reports. They are the groups starting with 3 (swell direction) and 4 (predominant swell period and height).

Workaround: None. These data will not be available.

! **Problem:** Gribdecoder crashes when trying to process data with erroneous dates.
(DR 5312)
Gridded data that is sent with erroneous dates on it, such as 02302000, will cause the Gribdecoder to crash.

Workaround: Purge the bad data from the Raw directory and restart the Gribdecoder.

! **Problem:** The Maritime Decoder is incorrectly decoding visibility for CMAN data. (DR 5338)
Some CMAN stations report visibility (e.g., BURL1 and GDIL1). The maritime decoder is incorrectly decoding the visibility (this is the group that begins with "46/"), and assigning a value of 55.52223 (meters), which other software is interpreting as 1/16 of a mile.

Workaround: None.

! **Problem:** The METAR Decoder will not decode individual local observations. (DR 5339)

Workaround: None

! **Problem:** The StdDBDecoder stops decoding text due to a bug when checking the AFOS ID of the product. (DR 5417)

Workaround: None

5.3 Failover

! **Problem:** When the LDAD server is not reachable, the DS failover takes a long time. (DR 2136)
When ls1 is not reachable, the time to failover the DS package takes at least 2 more minutes. The scripts startLDAD.csh and StopLDAD.csh have to time out to detect that the server is not reachable.

Workaround: None.

! **Problem:** First Red Banner is not received when failing back an AS swap package. (DR 2494)
When failing back either AS swap package to its primary, the first Red Banner message announcing a swap is in progress seldom appears on the D2Ds. The second Red Banner message announcing the swap is completed is received successfully.

Workaround: This does not affect the operation or success of the failover.

! **Problem:** D2D's may not come up after a DSswap due to a possible shell or file lock problem. (DR 2549)
New D2Ds started after the failover is complete will hang midway through start-up.

Workaround: Halt and re-run the DS swap package on DS1.

! **Problem:** The process monitor shows LAPS as being in a red state during a fail over of AS1 to AS2. (DR 3737) **Refer to User's Manual Section 11.1.1**
When AS1 is failed over to AS2, LAPS processes are not supposed to run. The process monitor reports this by showing LAPS processes as being in a down (red) state. This is correct, but this may make a site think it can restart the processes. This would be a mistake, causing other processes to be restarted but not fixing LAPS.

Workaround: None. Do not attempt to restart LAPS when either AS is in failover mode.

! **Problem:** Green times and auto-updating break after swapping AS1 to AS2. (DR 3945)
Occasionally one or more workstations de-register with the notification server following an AS1 to AS2 failover. At the time of the failover, a red banner message will appear on all the workstations running D2D alerting users to the fact that a failover has occurred.

Workaround: After AS1 to AS2 swap completes, check to see that auto-updating is working on each workstation. If auto-updating is not working on a particular workstation, the D2Ds on that workstation should be restarted, when convenient.

! **Problem:** Existing D2Ds freeze and new D2Ds hang during start-up after swapping back to DS1. (DR 4272)
After swapping the DS swap package back to DS1, sometimes existing D2Ds will freeze and new D2Ds cannot be started. The time on existing D2Ds will stop at the time the DS swap package is run on DS1, and new D2Ds will hang during start-up at the step for initializing image controls.

Workaround: Stop and start the DS swap package on DS1 after the fail back to DS1 is complete. Existing D2Ds will then "come back to life" and be fully functional, and new D2Ds will successfully come up.

! **Problem:** Simpact failover is slow when DS1 is disconnected from the FDDI ring. (DR 4562)
When a Simpact failover is performed while DS1 is disconnected from the FDDI ring (or possibly also if it is powered off), the Simpact swap slows to a crawl, and the following time out message is displayed 4 times "rcmd: connect: ds1-<site>: connection timed out". The swap will eventually complete, but this adds about 4 minutes to the swap time.

Workaround: If possible, ensure that DS1 is connected to the FDDI ring before performing a Simpact failover, even if DS2 is the primary Data Server at the moment.

! **Problem:** The Radar Multiple Request GUI locks if active during a ds swap. (DR 4796)
When the ds is swapped and the RMR GUI is active, parts of the GUI become unresponsive. The requests from before the swap continue to be processed. The user can cancel an active request and the request is canceled. However, the request is still listed in the GUI. Also, the user can not activate a new request.

Workaround: Close the RMR GUI and then reopen it. The application should then work properly.

! **Problem:** The Metar Decoder begins to report processing errors after a ds1 to ds2 swap. (DR 4882)
Infrequently, after failing over from ds1 to ds2, the metar decoder will begin to report flushing errors in conjunction with METAR_Plotfile::write(). It appears that products are being decoded successfully, but this flushing error occurs when trying to write to the plot file.

Workaround: Kill the MetarDecoder, and it will restart automatically.

! **Problem:** Process Monitor becomes confused during fail-over. (DR 4856)
During fail-over the Process Monitor becomes confused about which system it is running on. As a result processes are shown running on several systems.

Workaround: Ignore the monitor during the failover and then wait a few minutes for things to sync up.

! **Problem:** First attempt at using message handling after swapping to DS2 fails. (DR 5090)
The first attempt to send a message from the text workstation via message handling after swapping to DS2 does not succeed. In the text window display log, it says that the product is being sent to the MhsServer, but the MhsServer never receives it (no log entry appears in the MhsServer log). Thus, the product never gets sent out.

Workaround: The second and all subsequent attempts appear to be successful. Send a test message after swapping to DS2.

! **Problem:** Sometimes the notificationServer will not successfully restart after a DS swap. (DR 5122)
In about 25% of the dsswaps, the notification server will not successfully restart after the swap. During the DS swap run, MCServiceguard stops the notificationserver before restarting it. Sometimes the notificationserver does not come down quickly enough or successfully. In these cases, when MC goes to restart the notification server, it thinks that one is already running, and will not start another one, when actually the original one just has not come down yet. The result is that the user ends up without a notificationServer.

Workaround: Manually restart the Notification Server if it is not running after failover.

! **Problem:** Server swaps during the MSAS cron run may stop MSAS from running. (DR 5139)
The AS2 package was swapped from AS2 to AS1 around 20 past the hour. MSAS did not run for that hour or subsequent hours. The shared ds directories were down when the cron tried to write the netcdf files into the /awips/fxa/ldad/MSAS/sfc_netcdf link (to /data/fxa/LDAD/sfc_netcdf). The cron overwrote the link with a netcdf file, and the rest of MSAS processing was unable to find the linked directory. MSAS stopped writing the output netCDF files to the shared /data/fxa directory. I continued to overwrite the netcdf file created in /awips/fxa/ldad/MSAS.

Workaround: This problem is not likely to happen often. It will occur infrequently when a DS or AS2 swap occurs around 20 minutes past the hour. The fix is to recreate the link overwritten by the netcdf file, and MSAS will run on the next hour.

! **Problem:** The Metardecoder does not die on swap from AS1 to AS2. (DR 5169)
The Metardecoder was observed to stay alive during an automatic failover to as2. This also causes /data/fxa to fail to be unmounted from AS1 during the swap.

Workaround: Check as1 for fxa processes after a swap and look for the Metardecoder. If it is running on as1, kill it manually and unmount any /data/fxa directories.

! **Problem:** Parts of volume group 2 will fail to unmount during a DS swap. (DR 5179)
Sometimes during a DS swap, when the DS swap package is halting on the current DS, a particular directory will be busy, and will fail to umount. In MC/Serviceguard, an fuser is run on each directory in vg02, but sometimes a directory will be labeled busy as follows:
umount: cannot unmount /data/logs : Device busy
The result is that the directory cannot be unmounted. Ultimately, vg02 will fail to be deactivated. The end result is that you are unable to then run the package on the new DS. Directories that this has been observed with are /data/logs, /data/fxa/, /home, and /awips/hydroapps.

Workaround: On the DS where the halt of the DS swap package failed, run fuser by hand on the directory that was busy, eliminate the user if still present, umount the directory, and vgchange vg02 by hand. Then proceed to the new DS, and run the DS swap package there to continue with the failover.

! **Problem:** The LDAD MakePROCpage process sometimes hangs on a dsswap.
(DR 5197)
The MakePROCpage (which runs on as1f) may hang on a dsswap causing the LDAD internal data monitor to stop updating. The process hangs on a call to fping. The problem seems to be that the fping call fails because of the momentary loss of NIS - in effect no hostnames can be resolved, unfortunately makePROCpage is unable to recover.

Workaround: At worst this could happen up to 10% of the time. The work around is to kill MakePROCpage and allow the fxa cron to restart it.

! **Problem:** The asyncScheduler sometimes fails to die or restart during AS swaps.
(DR 5212)
The asyncScheduler at times will not die on AS1 during a swap to AS2, although it does start correctly on AS2. Other times, it dies during the swap, but does not restart on the server that is starting the as1swap package.

Workaround: After a swap of the AS1 swap package, check the AS servers for the asynchScheduler process. If the process is found on the server that the package was swapped from, kill it. If the process is not found on the server that the package was swapped to, as fxa, type /awips/fxa/bin/startAsyncScheduler.

! **Problem:** Distribute product is logging a usage error to /etc/cmcluster/dsswap/dsswap.control.log. (DR 5327)
When startLDAD.csh is called during a DS swap Distribute product is logging a usage error to /etc/cmcluster/dsswap/dsswap.control.log. Distribute product is probably being called incorrectly from the routerShefEncoder (SHEF_format.C)

Workaround: None. However, there is no operational impact.

! **Problem:** The ingProcMon.pl process (process monitor) sometimes hangs and can not be killed after a swap. (DR 5418)
Process Monitoring for AS1 has failed at three separate sites after an install. It turned out that ingProcMon.pl was not working but could not be killed.

Workaround: The work around was to reboot AS1. The ingProcMon.pl started normally (by cron) afterwards and process monitoring returned to normal.

! **Problem:** There is misleading text in a trap generated by CP_Reconfigure when option 4 selected. (DR 5432)
If a specific error (file /awips/fxa/readenv.sh is missing) is encountered when executing CP_Reconfigure and selecting option 4 (Return all devices to primary configuration), a trap is generated with the following message text: "Failed to reconfigure to primary/backup NEXRAD" The trap's message text should be "Failed to reconfigure to NORMAL" since option 4 involves reconfiguring all devices.

Workaround: None. If the error message is encountered, be aware that it may be misleading.

! **Problem:** The /opt/informix volume fails to unmount on AS's after swap and goes stale on AS's after a DS swap. (DR 5438)
During AS swaps the /opt/informix directory remains mounted on the swapped server. During three DS swaps the same directory has gone stale on as1. It appears to be OK on as2.

Workaround: Use the umount command to un-mount the directory from where it fails to un-mount and the mount command to mount the directory in the proper place.

! **Problem:** Some as1 processes do not halt on as2 when the as1 package is halted. (DR 5439)
The ingProcMon, ProcessSummary, MakeSUMMpage, and MakePROCpage and failed to halt when the as1 swap package was halted on as2. These processes continued to run and new ones were spawned on as1 when the as1swap package was started on as1.

Workaround: If any as1 processes remain on as2 after the as1 swap package is halted, kill them.

5.4 General

! **Problem:** Alarm/Alert sound disabled. (DR 2674) **Refer to User's Manual Section 4.2.6**
The send_sound function for Red Banner messages was disabled in R4.0 due to an error which caused it to use excessive CPU.

Workaround: None.

! **Problem:** Error messages displayed when selecting User ID's from D2D. (DR 4172)
When selecting certain names from the D2D, an error in Tcl Script appears indicating that it can't read "igc_mgr_priv (igc-2)": no such element in array. However, the user ID does get selected and the title bar is modified to show the user. No noticeable problems result from this error.

Workaround: None.

! **Problem:** The /opt/vni partition is not mounted on the workstations at all sites.
(DR 4624)
This directory contains the math library that the sites will need for local software development.

Workaround: When doing software development, compile from a server or workstation that has the /opt/vni partition available.

! **Problem:** When corrupted, the /tmp partition is not being recreated. (DR 5023)
When /tmp gets damaged and fsck is unable to correct the problem, it does not mount. The current cleantmp script uses bdf to determine the lvol number to recreate the partition using newfs. It can't get the logical volume number because the partition is not mounted.

Workaround: To correct this problem, the cleantmp file in /sbin/init.d on all HP-UX devices, needs to have the following 2 lines changed from this:
TMPLV='bdf /tmp'
TMPRLV='echo $TMPLV | cut -d" " -f8 |sec 's/lvol/rvol/"
to this:
TMPRLV='grep "[ ]/tmp[ ]" /etc/fstab | awk '{print $1}' | sed 's/lvol/rlvol/"
The 2 instances where the [ ] appears contain a tab character and a space so that either one of those characters may surround the /tmp in the fstab file.

! **Problem:** logproc file for MeasureWare filing up /var on ds's. (DR 5387)
The logproc file, /var/opt/perf/datafiles/logproc, for MeasureWare is filling up /var on several sites. This is the place where MeasureWare logs all the process data for a server. This file is not being rolled by the MeasureWare software and is causing /var to fill up on the DS's.

This process for MeasureWare needs to be disabled by default on a site. If metrics are needed for a site it can be turned on for that period of time and then shut off.

Workaround: When /var is too large, type in:
cat/dev/null > /var/opt/perf/datafiles/logproc

! **Problem:** /data/logs/fxa/<date> sometimes get 774 permissions which prevents the ncfuser from viewing logs. (DR 5924)
While investigating some problems on VUY the ncfuser (user id) could not cd to the fxa date log directory (/data/logs/fxa/000709, /data/logs/fxa/000710) because the permissions for the directory were drwxdrwxr-- (774).

Workaround: Log in as root, fxa, awipsusr or textdemo to view the logs. This has only happened occasionally. These permissions do not prevent ingest or logging by fxa, awipsusr, or textdemo.

5.5 Ingest Restart

! **Problem:** Restart kxxx radar software interface's return message references the wrong log. (DR 5482)
From the Ingest Restart User Interface "Restart kxxx radar software interface" works correctly but the returned message references the wrong log file. Here is the paragraph that is wrong:

"If data is not flowing in and if this is your first attempt at restarting the radar, see $LOG_DIR/stopRadar0.log on the ds for diagnostics, and try again. If this is your second attempt, and data is still not coming in, contact the NCF."

Workaround: Look at the correct log, not the one in the incorrect message. The kxxx radar is on port 4 of the simpact so the proper log is $LOG_DIR/stopRadar4.log not $LOG_DIR/stopRadar0.log.

! **Problem:** The Ingest Restart Interface does not give results of the restart. (DR 5555)
The Ingest Restart User Interface relies on the netscape monitor to give status as to whether a restart was successful or not. Unfortunately the information is not displayed for a few minutes when the Ingest Process monitor runs. Since restart is time critical, the user needs to know if it succeeded as soon as possible. If you take a while to run restart after launching the interface it is normal to get an "OK An error has occurred" message.

Workaround: The work around is to check the logs on the server that restart was run. The logs are /tmp/restart*.

! **Problem:** Canceling the response popup causes Ingest Restart to exit abnormally. (DR 5587)

After the Go! button is pressed in Ingest Restart, the user has to enter his name and the reason for the restart. If the cancel button is pressed in the response window, all of the restart application closes and a message "Restart GUI exits abnormally" appears in Netscape.

Workaround: Click the back button in Netscape and bring up the Ingest Restart application again.

! **Problem:** Ingest Restart icpReset1 occasionally fails. (DR 5739)
When selecting the option to restart radar software on board 1, icpreset1 sometimes reports that it is already being reset in the log /data/logs/fxa/icpReset_1.log. The text that is returned in Netscape implies that the command has been done successfully.

Workaround: Perform the restart again from the Ingest Restart GUI. The second has been successful in testing. Call the NCF if it doesn't work the second time.

! **Problem:** Ingest Restart - IcpReset1 cannot be executed if there are no dedicated radars on board 1. (DR 5856)
If there are less than three dedicated radars at a site, they are generally both located on board 0 of the Simpact. If there are three or more radars, the GUI has an option to restart the board 1 dedicated radars and also includes "(all dial ports)". However, if there are no dedicated radars on board 1, this option is not in the GUI and therefore Ingest restart cannot restart board 1 (icpReset1).

Workaround: The radar ingest may be restarted manually.

5.6 Localization/Installation

! **Problem:** Shapefile reader causes out of memory error and is slow. (DR 2793)
While running the MapClipper localization of the shape files, the MapClipper may give an out of memory error and stop localizing the files. The MapClipper localization also seems to take about 1 hour to read in a moderately sized shape file.

Workaround: None.

! **Problem:** Wrong acq_parms.txt file being created during localization. (DR 3360) **Refer to User's Manual Section 12**
At one site it was discovered that the acq_parms.txt file created during localization doesn't work and generates a multitude of error messages in the acqserver log. The file contained too many sites per line/entry in the hydro patterns section. The previous version of the file had to be put back in place for the acqserver to function correctly. When a site relocalizes, the corrected file and information will be lost and will need to be reimported; or the file will need to be saved under another name and put back in place after the localization.

Workaround: Limit the length of each line in the acq_patterns.txt file to 256 characters or less.

! **Problem:** Error message in localization when run on a workstation. (DR 3783)
An error occurred in running updateAcqParms.pl in the localization process. An unavailable file was trying to be closed causing the error.

Workaround: None.

! **Problem:** The -fixGeo option of mainScript.csh does not work. (DR 4966)
This mainScript option is used to repair the situation where gridded data files did not get initialized properly with their static data.

Workaround: This localization option is not used normally, but is handy to have when needed. However, if it were needed the site could relocalize from scratch.

! **Problem:** Localization of Hydro acq_patterns.txt does not pick up /realizations/RFC/RFC--hydro_acq_patterns.txt. (DR 5100)
The RFC localization of acq_patterns.txt does not use some information in the RFC--hydro_acq_patterns.txt file. This was noticed on one particular line:
TEXT ^SRUS7[RegCode].KWBC
This line was expected to produce a line of SRUS7[29].WBC, but it did not.

Workaround: After running any auxFiles localization on the DS, modify the /awips/fxa/data/acq_patterns.txt file with the correct entry, then copy it to DS2.

! **Problem:** Localization file mosaicDataMenus.auto is spelled wrong. (DR 5155)
The file /awips/fxa/data/localizationDataSets/<site>/mosiacDataMenus.auto is spelled wrong. Notice the mosiac instead of mosaic. In doMosaicProcessing.ksh, there is an if statement based on the correct spelling of the file, which of course does not exist, but throughout the rest of the script information is written into the misspelled version of the file, allowing it to be created successfully.

Workaround: None. Mosaic menus do get created successfully, and mosaic products can be displayed on D2D. The failure of the if statement should have no operational impact, and users should not experience any problems using this file in any on-site radar localizations.

! **Problem:** portInfo.txt file not being created during localization. (DR 5622)
During the 4.3.1 installs ate KRF and OAX, the portInfo.txt file was not created during localization. As a result the site had no radar data till the file was created in /awips/fxa/data/localizationDataSetx/XXX. Both sites has XXX-protInfo.txt file in place prior to install.

Workaround: If ~fxa/data/localizationDatasets/<site>portInfo.txt is missing, copy it there from ~fxa/data/localization/<site>/<site>-portInfo.txt.

5.7 NOAA Weather Wire Service (NWWS)

! **Problem:** The first half of the NWWS transmission thread doesn't notify the user in the event of a failure. (DR 5134)
It appears that the first half of the NWWS transmission thread will never notify the user if a product fails to be transmitted to the weather wire successfully. The keep alive message monitors the second half of the thread, that is, NWWSProduct to NWWSSchedule to uplink. The first half of the thread is transferNWWS to handleOUP to distributeproduct to MHS. If a failure occurs in this part of the thread, no notification is sent to the user. For example, if handleOUP fails in its attempt to transmit the product over the WAN, the script exits with a message in its log that wan dissemination failed. No notification is sent to the user in the form of any message window on the screen, such as the text workstation does when product dissemination fails.

Workaround: None. The user is not notified via any pop-up window or GUI if there has been a failure in this part of the thread. If a failure does occur (such as transferNWWS failing to map a valid AWIPS ID to a product, or distributeproduct failing to send a product because message handling is down), the failure will be noted in the appropriate log, either transferNWWS, handleOUP, or distributeproduct. Consult the logs for verification that product dissemination was successful.

! **Problem:** NWWSProduct and the NWWSSchedule start scripts do not return success/fail. (DR 5181)
The start scripts for the NWWSProduct and NWWSSchedule processes do not provide a return status that reflects the successful/unsuccessful invocation of their respective processes. Instead, they just exit with an error code. The below would be an example for the startNwwsSchedule script:

```
echo "NWWSSchedule starting up...."
${FXA_HOME}/bin/NWWSSchedule
if [ $? -ne 0 ] ; then
echo "ERROR: NWWSSchedule did not start up successfully!"
exit 1
fi
exit 0
```

Workaround: None.

! **Problem:** NWWSSchedule process is up but stops transmitting products. (DR 5218)
Infrequently, the NWWSSchedule process may stop transmitting products for no apparent reason. The process will stay up, and its log will continue to record receipt of products for

transmit, but the log will never record that a product has been transmitted successfully. Since the process remains up and the log continues to scroll, the NCF will not receive an alarm in this situation.

Workaround: Coordinate with the NCF to kill any hung NWWSTransmit processes and kill and restart the NWWSSchedule process. Users may want to periodically monitor the NWWSSchedule process log to watch for this problem.

! **Problem:** NWWSSchedule continues to transmit products even if the C200 Controller is down. (DR 5236)

Workaround: The NWWSSchedule process cannot detect when the C200 Controller is down. Products transmitted while the Controller is down are lost. Users may want to monitor the C200 Controller to verify its successful operation to avoid this problem.

! **Problem:** NWWSScheduler does not recover after a hard failure. (DR 5237)
The NWWSScheduler does not recover following a hard failure such as a power cycle of the C200 Controller. Data will not be processed and the NWWSTransmit process will hang.

Workaround: Contact the NCF. They have a workaround to restore successful operation in this situation.

! **Problem:** The transferNWWS script doesn't remove product header. (DR 5450)
Past versions of the transferNWWS script appropriately read the first output line from client applications in order to determine the appropriate header and where to transfer the product. The script then correctly stripped this information from the product before placing the header onto the product. Release 4.3.1 does not strip this information, leaving behind unwanted information.

Workaround: The only known workaround is for sites to edit the transferNWWS.pl script and replace the occurrence of "-U" in the first line with "-i -U". This will permit the script to edit the product correctly. This fix will be included in the 5.0 baseline.

! **Problem:** NWWSProduct crashes in 2 situations when sending to NWWSScheduler. (DR 5608)
Situation 1: When the NWWSScheduler shuts down, it creates a queue of any products that will need to be resent when it comes back up, if necessary. When the Scheduler is restarted, it will resend the products in its queue, if any, before accepting new products from NWWSProduct for transmission. If NWWSProduct attempts to send a product to NWWSSchedule while Schedule is processing its queue, NWWSProduct will say it cannot reach host and will crash. The product that NWWSProduct was attempting to send will not be queued and will be lost.

Situation 2: If NWWSProduct attempts to send a product to NWWSSchedule while NWWSSchedule is down, NWWSProduct will say it can not reach host and then crash. The product NWWSProduct was trying to send will not be queued and will be lost.

Workaround: None. This should happen very rarely. If you notice a product has not gone out, resend it. Restart the NWWSProduct manually when it crashes. This happens regularly at midnight when the logs are broken.

5.8 On-Line User's Guide

! **Problem:** Keyword links in Netscape Script help windows are not working. (DR 4120)
The Keyword section at the bottom of all Text Script Netscape help windows has dead end links. There appear to be no defined help pages for these key words.

Workaround: None.

! **Problem:** Netscape bookmarks are incorrect. (DR 4392)
The Netscape default bookmarks include sites that are inaccessible (outside the WAN) and do not include the useful links - like AWIPS documentation, help, product monitor, . . . etc. This is a problem because there are no links to the online documentation from D2D other than from the Volume Browser Pop up.

Workaround: Sites should set their own bookmarks.

! **Problem:** the Netscape Monitor still indicates that it has the Release 4.1 User's Guide. (DR 5096)
The User's Guide can be accessed from the Netscape Data Monitor. The Monitor says it is the 4.1 User's Guide and not the 4.2 User's Guide..

Workaround: This is a cosmetic problem only. The existing html documents are referenced.

5.9 Printing

! **Problem:** 4 panel displays do not print correctly. (DR 602)
Printing a 4 panel display produces a mess of all contours plotted on a single map background. An information box appears indicating that printing 4 panel displays is not currently supported.

Workaround: None.

! **Problem:** Some radar products can't be printed because the file size is too large. (DR 4594)

Some radar products can sometimes create very large print files, both on lp1 and lp2. If the print files are too large (e.g. >100 meg), they will not print successfully. When this happens, the process creating the file hangs and begins to consume much of the cpu time. In the worst case, this situation will cause /var to fill up, and may kick the workstation back to the login screen and prevent anyone from logging in to the workstation. This seems to be more likely to happen when printing radar products at large scales. Radar products that this has occurred with are Composite reflectivity, radar mosaic Composite Reflectivity, VIL/Comp Refl, and Layer 2 Max Refl.

Workaround: Kill the hung print process, remove the print job from the queue, bounce the print processes (lpshut and lpsched as root), and clean out the leftover print file in /var/spool/lp. This will allow users to resume printing other products, and will fix the worst case of not being to log in to the workstation.

5.10 Product/Process/System Monitoring

Refer to User's Manual Section 11

! **Problem:** The CPU monitor stays red (or yellow) after failing back from DS2. (DR 3736)
The CPU monitor will keep checking on DS2 even after DS2 is not being used and not recording its CPU utilization. Since DS2 will almost always be at 100% utilization during a failover, this means that even after failing back to DS1 the CPU monitor will continue to report a problem with DS2.

Workaround: Remove /data/fxa/data/ds2-*CpuTab.txt after a fail back to DS1.

! **Problem:** Parts or all of the Product Monitor will occasionally stop updating. (DR 4047)
Occasionally one section or an entire Netscape Product Monitor window will stop updating for no obvious reason. If Netscape is left running for a day or more (it is not clear whether the amount of time a Netscape window has been up is a factor), often one section or even the entire window will stop updating. Sometimes Netscape on one workstation will be current, while on another workstation on the same system Netscape will have stopped updating. This has been observed while on all server configurations, and is not necessarily in conjunction with any specific failovers.

Workaround: Reload the window from the menu.

! **Problem:** Some Netscape Monitor file paths are incorrect. (DR 4113)
Incorrect file paths in the Data Monitor include:
1. Under "Point Data", METAR PLOT, the first path listed should be $FXA_DATA/point/metar/netcdf. The "CDF" needs to be made lowercase.
2. Under "Sat Data", All products need to have SBN/netCDF added to the path after $FXA_DATA/sat/...

These file paths are incorrect on the display only, and do not affect the ability of Netscape to monitor the status of these data, nor the ability of AWIPS to successfully ingest or store these data.

Workaround: None.

! **Problem:** Bad support links in Data Monitor. (DR 4145)
The upper-right pane of the Data Monitor should not be located in the infoPages directory. The effect of this is that the release notes and User Guide links incorrectly point to a non-existent directory. Also, NCFStatus.html does not belong in the infoPages directory. It should be installed in /awips/fxa/htdocs/dataMon.

Workaround: None.

! **Problem:** Netscape preferences need to be modified. (DR 4213)
The default setup for Netscape 4.07 (delivered with Build 4.2) interprets files with extension .doc as MSWord files. Since there are no Word files in AWIPS, and AWIPS uses .doc for much of the internal documentation viewed with Netscape, the default preference set needs to be modified.

Workaround: There is no operational impact. The Netscape preferences can be modified manually by the site to change the default preference so that .doc files are not related to MS Word.

! **Problem:** Netscape Monitor will sometimes stop working or revert back to a previous date after a server swap. (DR 4229)
After server swaps, some panes of netscape will either stop updating from that point on, or will revert back to a previous date and then resume updating normally after a few minutes.

Workaround: Reload the Netscape monitoring.

! **Problem:** Occasional missing process summary page (DR 4496) **Refer to User's Manual Section 11.2**
Occasionally, the process summary page is missing one of the updates from a server.

Workaround: The missing process summary page will update within a few minutes with the next refresh of Netscape. To force a refresh sooner than that, hold down the shift key and select reload from the Netscape menu.

! **Problem:** Netscape does not monitor all acquired grid data. (DR 5040)
Netscape does not monitor all of the grid data that is being acquired into each AWIPS. For example, ECMWF data is being acquired by CONUS sites, but the Grid Monitor does not list ECMWF and therefore the site will not easily know if the data are present or late.

Workaround: You may look to see when the latest Grid data were acquired by looking at the dates of the appropriate netCDF files under /data/fxa/Grid.

! **Problem:** Netscape does not monitor the process_dpafiles process. (DR 5087)
The Netscape Data Monitor does not notify the users if process_dpafiles is down on the ds.

Workaround: Check for the process manually.

! **Problem:** Running CPU history monitor from Netscape will produce zombie processes. (DR 5154)
Running the CPU history monitor from the Ingest Processes section of Netscape produces a zombie csh process owned by fxa on that workstation, and a zombie cpu-setup.sh process owned by www on as1.

Workaround: Both zombie processes will die when the CPU history monitor is closed. These zombie processes do not appear to affect the operation of the Netscape, CPU history monitor, or the workstation.

! **Problem:** LDAD monitors show 100 for year. (DR 5214)
Dates on the LDAD acquisition and dissemination monitors used 2 digits for the year (e.g., Dec-23-99 18:30). With the change of year, these now read Jan-5-100 17:05, for example, rather than 00.

Workaround: None. However, this has no operational impact.

! **Problem:** The /opt partition runs above 80% often. (DR 5440)
The /opt directory on as1 is often running above 80%. Due to new netscape server software.

Workaround: None. This problem has little impact. Ignore the alarms unless they go significantly above 80%. The alarm threshold may be raised in a future release.

! **Problem:** Disk Usage data is not present for DS when the package swapped to DS2. (DR 5442)
In the Disk Usage Data section of the Data Monitor on Netscape, the disk usage for DS1 is listed when the dsswap package is on DS1. However, when the package is swapped to DS2, no disk usage for the DS appears at all. The section only shows the disk usage for the AS's and WS's.

Workaround: None. You may use the bdf command to determine the disk usage for the DS disk partitions.

! **Problem:** An image on the Data Monitor needs updating. (DR 5372)

One image, Text.gif, never made it into 4.3. As a result one of the images in the Data Monitor is four times the size of the others.

Workaround: None. It doesn't impact operations but makes the display look silly.

5.11 Radar System/Archiving

! **Problem:** Archiving is allowed when in any localization. (DR 3685) **Refer to User's Manual Section 7.7**
Archiving should be restricted to the default localization. When D2D is automatically restarted for case display it comes up in the default localization.

Workaround: None.

! **Problem:** When displaying a case, the time range for the case is not displayed. (DR 3688) **Refer to User's Manual Section 7.7.4**
When a case is being displayed, its time range is not easily determined. The range could be displayed after the case name on the window title.

Workaround: Time range for a product of interest can be obtained by performing an inventory.

! **Problem:** Continuous store tree view not initializing correctly. (DR 3689) **Refer to User's Manual Section 7.7.1**
The continuous store dialog attempts to come up with the previously submitted products selections checked. This checking is currently incomplete - no checking at all is done for the right hand tree view and incorrect partial checking is seen on the left hand tree view.

Workaround: None.

! **Problem:** The 'Needed' disk space for restore displays as zero MB if less than one MB is needed. (DR 3716) **Refer to User's Manual Section 7.7.3**

Workaround: None.

! **Problem:** Help button on Radar Archive GUI not working. (DR 3946) **Refer to User's Manual Section 7.7**
Selecting the help button should bring up the users guide on Netscape, but instead nothing happens.

Workaround: None.

! **Problem:** Feedback response time is very long when selecting the first session to restore. (DR 3993) **Refer to User's Manual Section 7.7.3**

When selecting the first media session to restore on the restore dialog, it takes a long time (at least one to two minutes) for the check mark to appear on the clock icon for the session. Thus, it's hard for the user to know if they actually selected it.

Workaround: If the user selects another of the archive manager tabs and the GUI does not switch to that tab immediately, then the user knows that the media session has been selected and that the archive manager is working.

! **Problem:** Coordination between two or more archive managers does not work correctly. (DR 3994) **Refer to User's Manual Section 7.7**
Currently, it is possible (and even likely) that two or more archive managers running at the same time will step on each others "toes". However, this is only true if multiple managers are doing stores and restores. There should be no problem if all but one of the managers are being used to select cases for display.

Workaround: None. Run only one archive manager or restore at any given time.

! **Problem:** Making selections for restore causes continuous store to be disabled.
(DR 3996) **Refer to User's Manual Sections 7.7.1 and 7.7.3**
Selecting a media session for restore or selecting an alternate tape for restore causes continuous store to be disabled, and "Restore running" to be displayed on the continuous store status bar. Selecting "Cancel" in the restore tab clears out this condition.

Workaround: Turn off archive store before starting a restore session.

! **Problem:** Analog line disconnect leaves radar line in Pending State. (DR 4049)
During both short and long analog line disconnects, the radar line connection was left in a Pending state. The user sees a Lost Connection message on the radar status bar on D2D. The wfoApi* file will show a connect, but it will not receive any GSMs or products.

Workaround: Run icpReset as fxa user on the affected line/board.

! **Problem:** The radar archive script OmniGetFiles.sh is returning errors. (DR 4122)
The OmniGetFiles.sh process for radar archiving returns an error for a file that is just junk (i.e. @#%&#). This does not appear to have any effect on the re-calculation of disk space needed for a restore, and can be ignored if observed in any radar archiving log file.

Workaround: None.

! **Problem:** Radar Storage process failing to connect. (DR 4925)
There have been two cases where the radarServer fails to connect. Upon restart it would continue to fail with memory errors until all restarts were exhausted. The process would then terminate. The wfoApi.StateInfo file in /data/fxa/workFiles showed numerous "failed to connect to IPC" errors.

Workaround: Remove the wfoApi.StateInfo file from /data/fxa/workFiles and restart the radar and ingest processes on ds1 and as1.

! **Problem:** Radar Archiver does not calculate size accurately. (DR 5101) **Refer to User's Manual Section 7.7.3**
After archiving radar data, a user is able to calculate the size of the radar data that was stored. After ftp'd 14M of radar data to the site and archiving the data, the archive_cache directory indicated a size of approximately 12M following the archive. However, after using the Re-calculate button, a value of 3M was returned.

Workaround: None. Radar Archiving ability is not affected. Just be aware that the recalculate button may give false results.

! **Problem:** The Archive GUI becomes unusable when left open overnight. (DR 5168) **Refer to User's Manual Section 7.7**
The radar archive GUI will become unusable when left open overnight. A popup window will appear at about 2Z indicating that there is a problem identifying the archive media installed. There is no way to close this window through the GUI.

Workaround: When this occurs, the archiveWish process on the workstation will have to be killed. When a new Radar Archive GUI is then started, the user can successfully store and restore from the current tape. The user is still able to use the D2D while the archive GUI is in the unusable state.

! **Problem:** RadarStorage might prevent products from being stored. (DR 5250)
If a site is not in wmoSiteInfo.txt, RadarStorage does not even store the product.

Workaround: If you add a radar, you will need to update wmoSiteInfo.txt in order for products to be stored.

! **Problem:** RadarStorage.StateInfo - radar WAN data is not going out. (DR 5272)
At SGF they were sending out the DPA and RCM products; however, were not issuing radar wan data for the six RPS List products and the site was in VCP 21. It was discovered the RadarStorage.StateInfo in /data/fxa/workFile was corrupted.

Workaround: The workaround is to remove this file, recreate it and put a '1' in the file.

! **Problem:** NEXRAD Unit Status: Delta Sys Cal problem. (DR 5279)
There appears to be a problem with AWIPS displaying "Delta Sys Cal" in the NEXRAD Unit Status graphic. Nexrad Units whose PUPs report negative numbers for Delta Sys Cal have a problem displaying the number on AWIPS. The number turns out to be a positive 6335.

Workaround: None.

! **Problem:** Some radar data received over the WAN not being stored. The RadarStorage log on as1 shows the radar WAN data, however these data were not stored because the radars were reported as associated radars in wfoApi.StateInfo. (DR 5341).

Workaround: None

! **Problem:** Data from associated radars sometimes not to being sent out over the WAN. (DR 5360).

Workaround: Restart the RadarStorage process.

! **Problem:** Radar Alert Request Save and Exit buttons are sometimes mis-leading. (DR 5378) Using the /data/fxa/radar/alertRequest/alertRequest.areax.KXXX file as a reference as to what alerts are at the RPG, the AWIPS GUI sometimes does not correspond to the file. When the Save button is used the AWIPS GUI is updated but alertRequest.area is not which can be mis-leading if an alert is sent then altered and saved. Someone viewing the alert GUI has no way of knowing what alerts are active at the RPG. Even when viewing the alertRequest.area file only the number of categories (alerts) is shown, not what those alerts are. Another problem arises when a user sends an alert request, alters the list, then exits. The normal Warning! GUI does not appear and instead all changes are automatically saved. This again can lead to confusion if the forecaster did not mean to save changes or if someone views the GUI and assumes what is displayed are the active alerts.

Workaround: Do not use the Save button since any Send button will also save.

! **Problem:** badRadar directory retains old files. (DR 5431)
Files in /data/fxa/badRadar tend to be all from the last 31st day of the month. Current files get removed by the purger and are thus unavailable for troubleshooting review. The purger is designed for time-based file names; it does not work well on directories containing alpha-based names.

Workaround: The workaround, is to add:

```
$FXA_DATA/badRadar  1  *
```

to ds1/ds2:/awips/fxa/data/scour.conf.ds

! **Problem:** The /data/fxa/archive directories are filling up (too many inodes) (DR 5441)
At a site, the NCF noticed that /data/fxa/archive/OUP/archive contained over 51,267 files. Other sites also had large /data/fxa/archive/OUP and /data/fxa/archive/obs directories. One site had an inode over 4 million - we were not able to look in that directory (ls did not work). These directories are not being scoured or purged and could cause the scripts that write to this directory to fail.

Workaround: The workaround is to remove these directories and recreate them (rm takes to long).

! **Problem:** Radar Archive Manager has no ability to clean up previous sessions data. (DR 5474)
Sites have requested procedures to clean up trial and error sessions that have been built up as a result of attempts to learn the Radar Archive Manager interface. The interface tends to be littered with useless entries and references to media that no longer exist. There is no housekeeping capability available at this time.

Workaround: None.

! **Problem:** National set files need to be added to nationalData directory. (DR 5514)
The national set files rps-RPOPG* need to be present in the nationalData directory. Currently these files come out in /awips/fxa/data. So these file need to be deleted from the baseline and checked into the narionalData directory with the rest of these data files.

Workaround: Should rps-RPGOP* files be found in /awips/fxa/data instead of /data/fxa/nationalData, they need to be moved.

! **Problem:** The Simpact Monitor needs to be restarted following a configuration change. (DR 5566)
Following a Simpact configuration change (e.g. from 14.4k radar data on port 3 to 56k data on port 0), radar processing is started up using a new portInfo.txt configuration file. The monitor mcMonFreewayd process monitors data ingest between the Simpact and the wfoAPI processes, and will report that the data are not coming in. The mcMonFreewayd process should also be restarted so it will to pick up the new configuration.

Workaround: Restart the process. As root on the ds, type:
/sbin/init.d/monitorFreeway stop
/sbin/init.d/monitorFreeway start

! **Problem:** Some sites sending radar data from an associated radar, even if another site owned the radar and was already sending the data. (DR 5598)

Workaround: None

Problem: RPS error message when truncated due to size should be issued to user. (DR 5958)
When the user generated RPS list is combined with the national RPS list it is often too large according to portInfo.txt. There should be a message indicating that the combined user RPS list and the nationaldata list was too large and was truncated.

Workaround: None.

! **Problem:** Radar archive stores sometimes over-writes previous stores. (DR 5619)
The OmniBack backup sessions created by storing data to tape in the radar archiver should be permanently protected against over-writes. For some sites the OmniBack software gets into a state where the sessions are not protected, with the result that only the most recent session is on the tape since it over-wrote the previous session.

Workaround: None.

! **Problem:** the RadarServer does not accept additions to portInfo or wmoSiteInfo until it is restarted. (DR 5621)
If adding or deleting a site ID from portInfo.txt or wmoSiteInfo.txt, the RadarServer will not "see" those changes until it is restarted.

Workaround: After modifying portInfo.txt or wmoSiteInfo.txt, kill the RadarServer. The restart it on ds1 as fxa by typing:
/awips/fxa/bin/RadarServer &.
Please note if modifications (not additions or deletions of site ID) are made to portInfo.txt (such as number of products), then a registration msg will update RadarServer and the server does not have to be bounced.

! **Problem:** Radar Archive fails to store some of the products selected for store. (DR 5630)
Certain products in the store tree views do not get stored even though they are selected by the user. Now that the continuous store tree view is initializing correctly, committing continuous store product selections and then restarting the archive manager will show which products will not be stored. They are the ones the user checked before the commit but are not checked after the restart.

Workaround: None.

! **Problem:** SCAN has site threat interrogation inconsistencies. (DR 5732)
The data displayed while sampling the local sites rendered by the StormThreatDepict depictable was sporadically inaccurate.

Workaround: None.

! **Problem:** CAPE and SREH are misnamed in the SCAN Cell Table. (DR 5733)
The CAPE and Helicity variables are mis-named in the IssueAlarms.C file. A symptom of this problem is un-issued alarms.

Workaround: None.

! **Problem:** RadarServer does not accept changes to wmoSiteInfo.txt. (DR 5753)

A site ran an old version of wmoSiteInfo.txt on ds2 which did not include a particular radar. The site added it to wmoSiteInfo.txt and bounced the RadarServer (DR 5621), but the radar was not added to wfoApi.StateInfo.txt so RadarServer did not accept the added site.

Workaround: The workaround is to add the an entry for the "new" radar to the updated wfoApi.StateInfo (/data/fxa/workFiles) and include the socket IPC address of the wfoApi process managing the new radar. (RadarServer should be brought down during editing of this file). The latest IPC address can be retrieved from the current RadarServer log file. This information is relayed in the last Registration message.

! **Problem:** RCMs from extraneous radars not filtered out at CP. (DR 5885)
RCMs from the SBN are being ingested into AWIPS from radars that are not in a site's dialRadars.txt file. They are not being filtered out at the CP.

Workaround: acq_wmo_parms.sbn.radar needs to be modified to include the filter for SDUS4 (RCM) products.

! **Problem:** wfoApi.stateInfo file is not updating the VCP mode. (DR 6017)
After rebuilding the wfoApi.StateInfo file after the site had added a new dedicated radar line it was observed any time the radar changed VCP modes, the wfoApi.StateInfo file did not change the VCP mode.

Workaround: Resend the RPS list which should update the wfoAPI.StateInfo file.

5.12 Site Specific/National Centers

! **Problem:** World Mercator maps may get drawn incorrectly. (DR 2859)
When making a map of the whole world using a mercator or cylindrical equidistant projection, some vectors drawn at the seam of the projection (normally 180 degrees longitude) fly across the whole screen. This needs to be fixed to support some of the national centers' work.

Workaround: None

! **Problem:** Non-contiguous grids do not display correctly. (DR 2876)
Normally when contouring gridded data, the contouring is done in the frame of reference of the gridded data and the endpoints of the contours will be remapped as a final step. If the projections of the gridded data and the display are too dissimilar, the gridded data will be remapped before contouring. This was working correctly for the case of highly unconformal remaps, but not for all the cases where the area of the gridded data was non-contiguous in the area of the display. Currently, it is believed that this bug would only effect future national centers work.

Workaround: None

! **Problem:** The ldadServer process should not be automatically started at National Centers. (DR 3620)
The startIngest.ds1 script automatically tries to start the ldadserver. However, National Centers currently do not have LDAD. Thus, when the startIngest.ds1 script is run at these sites, it will attempt to start the process and fail. Output errors will be written to the screen, but no adverse affects result from this. The startIngest.ds1 script will simply write the error messages to the screen, and then continue with its execution.

Workaround: Simply ignore the errors that are created in this situation.

! **Problem:** The 4 additional modems in VIR2 do not switch to backup. (DR 4520)
The four additional modems in VIR2 at the OSFW site do not switch to backup using CP_Reconfigure. This problem affects only the OSFW system.

Workaround: Manually push the A/B button on the VIR switch panel to failover these four modems.

5.13 System Process/Log

! **Problem:** Decoder log messages. (DR 1304)
There are notices in the decoder logs that claim the decoder has not processed a message for periods of time. However, sometimes the times in the log clearly shows that this is not true. These decoder log messages appear when the logs are broken daily, as well as whenever data ingest is restarted.

Workaround: None. When debugging, ignore this message if the decoder log indicates other activity.

! **Problem:** afoscommsrv logs grow continually without a break. (DR 1397)
The /data/logs/fxa/afoscommsrv.log and /data/logs/fxa/afoscommsrv.stderr logs on as1 are not broken like other logs. Currently the logs are not seperated by date or purged of old data. This may eventually cause /data/logs to be filled on as1.

Workaround: Periodically check/clean out these logs

! **Problem:** acqservers do not clean old processes and logs. (DR 2496)
In this situation, a grep for acq processes on the DS will reveal several of these processes (as many as a half dozen versus three normally). This is seen primarily after CP swaps or reboots and does not appear to affect performance.

Workaround: This problem has little operational effect. The old processes that were active before the CP swap may be killed if desired.

! **Problem:** Afoscommsrv will occasionally die. (DR 3188) **Refer to User's Manual Section 11.2**
The afoscommsrv has been observed to die occasionally. An ITO template is in place for this process in 4.2 to notify the NCF when this occurs.

Workaround: In most cases, the NCF will restart the process within a short time of it dies. To restart the process, as fxa on AS1, run startAFOS.

! **Problem:** stopIngest scripts report minor error messages. (DR 3518)
The errors are minor but could cause unnecessary concern for users troubleshooting logs.

Workaround: Ignore the error messages since there is a single script for all servers. Not all processes run on the system being restarted.

! **Problem:** The NWWSScheduler creates thousands of logs if the NWWS port isn't configured properly before starting NWWSSchedule. (DR 3873)

Workaround: Delete the log files in the log directory and shut down all NWWS processes. Reconfigure the NWWS port correctly and restart NWWS processes again.

! **Problem:** Some processes are writing multiple logs per day to the fxa log directory. (DR 4102)
Currently over 250 individual log files are being put in the fxa log directory ($LOG_DIR) each day. Currently "ll" and similar commands that take a file list as a parameter are occasionally failing. The error usually is "The parameter list is too long." This makes it difficult to view log files or to look for particular log files.

Workaround: The file list will be too long for the ll command to work very rarely. If the file list does get too long for ll to work, you may execute the find command instead, as in the following example:
find . -name "*Text*" -exec ll {} \;

! **Problem:** displayLogPref tty setting is set incorrectly. (DR 4230)
In displayLogPref, the setting for all all tty all is set incorrectly to on. It should be set to off. When it is set to on, error logging will be sent to the screen and to any stdout, instead of to a log as it would be if set to off.

Workaround: None

! **Problem:** Text data is lost when the text database writer is down. (DR 4493)
AWIPS will experience text data loss if the textdb write process has been stopped, either due to a data server failover, or when troubleshooting Informix issues. Whenever the textdb processes on the data server have been stopped, acquisition passes data to the text decoders

on the application server, which in turn will report: NCF_FAIL to write to database. There is now way for this data to be recovered on site.

Workaround: Call the NCF for assistance in recovering the lost text products (the resolution involves failing over the CP's at the site and retransmitting data).

! **Problem:** The trfNarrowband2netCDF process is hanging on AS2. (DR 4628)
This process causes high CPU usage and has occurred at a number of sites. Usually there are one or two instances of this process running. The process is used for ingesting LAPS radar data.

Workaround: When the process(s) are killed manually, things return to normal.

! **Problem:** There is an error message in the log file for wwa_nwr whenever it is run. (DR 4798)
The following error shows up in the log file foe wwa_nwr whenever the executable is run:
LOG-STATUS: Log file opened on host ds1-tbw4 at Tue Sep 21 13:15:26 1999
13:15:26.608 wwa_nwr.C EVENT: About to connect to wwastmt_srv on as1
13:15:26.704 wwa_nwr.C BUG: errno jl: 239
(0) 0x00166070 traceBack__FPCcCi + 0x320 [/awips/adapt/ifps/bin/wwa_nwr]
(1) 0x00166918 __als__9LogStreamFRC7ostream + 0x110 [/awips/adapt/ifps/bin/wwa_nwr]
(2) 0x00053ee8 main + 0x1180 [/awips/adapt/ifps/bin/wwa_nwr]
(3) 0xc05a3c90 _start + 0x8c [/usr/lib/libcma.1]
(4) 0x00017c24 $START$ + 0x134 [/awips/adapt/ifps/bin/wwa_nwr]
13:15:46.896 ChildProcess.C EVENT: wwaPush started

Workaround: None. This does not prevent the executable from working, but might cause confusion when troubleshooting.

! **Problem:** The textNotificationServer occasionally exits. (DR 5067)
Logs indicate the following:
01:14:01.923 DataSocket.C DEBUG: PARTIAL SOCKET WRITE to : as1-psr/4307/13602
Wrote 0 bytes but still have 92 bytes to write.....
01:17:02.849 TextNotificationServer.C EVENT: Received text notification for: SEAMTRTCM
01:17:03.750 ThreadDataSocket.C PROBLEM: 266 messages were never sent.
01:17:03.753 DataSocket.C DEBUG: Closing the socket to as1-psr/4307/13602
01:17:03.754 ParameterizedMsg.C EVENT: Send of IPC message failed; Target not available.
Target: as1-psr/4307/13602
Module: 15
Type: 0

01:17:03.755 TextNotificationServer.C EVENT: Try again later failure sending notification for SEAMTRTCM to client as1-psr/4307/13602
This problem may be similar to DR 2523, but it appears that the textNotificationServer may be exiting before the problem spreads as before.

Workaround: Restart the textNotificationServer.

! **Problem:** Warning message from hwrnwws.C. (DR 5099)
The hwrnwws generates the following: "LOG-STATUS: Warning: "hwrnwws.C", line 111: message not terminated with \n or endl".

Workaround: This doesn't seem to affect the product being generated or sent, but might cause confusion when troubleshooting.

! **Problem:** The CommsRouter COMMS_ROUTER stops processing satellite data. (DR 5113)
Infrequently the CommsRouter COMMS_ROUTER has stopped processing satellite data. The COMMS_ROUTER log will show satellite data moving through successfully, but then for no apparent reason the log will stop showing satellite data moving through and will instead start logging the satellite data pattern. Throughout all this all other types of data continue to move through the COMMS_ROUTER successfully. The acqserver log shows the satellite data continuing to be written to Raw throughout this as well, which results in the raw files piling up in Raw (the Satdecoder starts reregistering after this happens to the COMMS_ROUTER, and stops decoding products out of Raw). The end result is that the site no longer has current satellite data.

Workaround: Bounce ingest on DS1 to "wake up" the COMMS_ROUTER to the satellite data piling up in Raw.

! **Problem:** The text reader process will occasionally exit. (DR 5145)
The TextDB reader process has been observed to crash infrequently. The crash occurs with a traceback in the TextDB reader log, followed by the closing of any open sockets, including one with the notification server. The full extent of the problem is not known at this time, but one contributing factor may be that the text reader will continually (every minute) update on the last product or products selected out of the text browser. Example: if you select PITMTRPIT out of the text browser, the text reader will send requests for that product to that workstation every minute until either the workstation is logged out or a different product is selected from the browser, at which time it will start doing it for that product.

Workaround: This problem occurs infrequently. If it becomes an issue, the problem may be mitigated by limiting the use of the text browser if possible. If no browsers are opened after a text workstation is logged in, the problem will not occur with that workstation. If browser use is still desired, users can log out and back in to each text workstation periodically

to clear out any instances of these requests that may be occurring with any workstations. Simply closing the text browser or even the associated text window will not stop the problem.

! **Problem:** TextCont2 process attempts to start the shefEncoder upon start-up. (DR 5164)
When the DataController COMMS_ROUTER TextCont2.config process starts up, it attempts to start up the shefEncoder on as1. It makes about two dozen attempts to start the shefEncoder before it stops trying. The log entry in the DataController log is as follows:
22:08:46.074 ChildProcess.C EVENT: /awips/fxa/bin/shefEncoder started
22:08:46.002 ChildProcess.C PROBLEM: execvp error for /awips/fxa/bin/shefEncoder: No such file or directory
22:08:46.245 ChildProcessSet.C EVENT: Process 8204 has exited
Once it gives up trying, the TextCont2.config process then proceeds on to start its normal business successfully.

Workaround: None. There does not appear to be a significant performance or operations problem with this DR, as the restarts only delay the start of normal operations for the TextCont2 process for 10 seconds or so.

! **Problem:** The LAMP purge_report cron produces a traceback. (DR 5188)
The purge_report cron occasionally produces an error and a traceback in a log in as2:/data/logs/fxa/. It may fail to continue purging data during that run.

Workaround: None. This should not be a big problem because the cron tries to delete 24 hours of data and usually does not error out when it runs during the next hour. The cron should run to completion many times during the 24 hours.

! **Problem:** Radar processes are writing log files to /awips/fxa/bin (tsitrace, dlitrace, tsilog, dlilog). (DR 5192)
The radar processes are writing log files in /awips/fxa/bin (tsitrace, dlitrace, tsilog, dlilog). The problem is that it has become a standard to put logs in /data/logs and not into a directory with executable files.

Workaround: There is no work around but there is also no impact on the sites - other that having to keep /awips/fxa/bin a writeable directory.

! **Problem:** RMR_Server dies with a Segmentation Violation Signal 11. (DR 5213)
RMR_Servers are dying with a Segmentation Violation Signal 11 at numerous sites.

Workaround: The RMR_Server may be restarted. On the ds as fxa, run /awips/fxa/bin/RMR_Server.

! **Problem:** SatDecoder and GribDecoder are reporting an incorrect product length in their logs. (DR 5224)

The Product length reported in the SatDecoder log is always incorrectly reporting ProdLen as 40, and the GribDecoder log is always incorrectly reporting ProdLen as 18

Workaround: This problem has no operational impact. This does not cause any ingest problems, but gives misinformation to users trying to resolve problems.

! **Problem:** 4-digit-year logs clogging disks. (DR 5230)
Scour is not deleting 4-digit-year log directories.

Workaround: None. However, if this is causing any problems, you may manually delete the 4-digit-year log directories.

! **Problem:** TextNotification may take too much swap space on the as1. (DR 5396)
The textNotificationServer at a few sites has been seen to take up 100M to 200M of memory. This size is a large portion of the available memory swap space.

Workaround: A restart of textdb.as1 will bring the memory taken by the textNoficationServer down to a smaller size.

! **Problem:** The profilerDecoder may take too much swap space on as1. (DR 5400)
At a site, the profileDecoder was 111M in size, which caused a significant amount of swap space to be taken.

Workaround: A restart of ingest on as1 will bring the memory taken by the profilerDecoder down to a smaller size.

! **Problem:** mcRollogs is sometimes failing to restart "ontape -c". (DR 5437)
The rollogs function is designed to kill the existing ontape -c process and roll the informix logs. At random, some sites logs are getting rolled but the ontape process is not getting respawned. This is causing the logs to fill on ds1 and if not caught, the Informix database will lock up.

Workaround: Restart the ontape process. As informix on the ds, type:
echo "y" | /bin/nohup /opt/informix/bin/ontape -c &

! **Problem:** The /data/logs partition is over 80% on workstations and can potentially fill up. (DR 5452)
The /data/logs partition on workstations of some sites are getting large display logs that cause the /data/logs partition to alarm at the NCF. This was not caused by break log problems as fixed in DR 5259. The /data/logs/fxa/display/<display>/<date> directories were between 12 and 18 mb each which meant that the /data/logs (102mb available) partition was over 80% full (If both D2D's were up and had as much logging as the worst day - 18 mb - 18mb per day - kept for 3 days for 2 displays 18X3X2=108mb possible).

Workaround: A workaround is to remove the oldest day of logs to keep only 2 days instead of 3.

! **Problem:** The mcmonfreeway process using 98% of CPU on ds1. (DR 5453)
The mcmonfreeway process is taking up 98% of CPU usage according to top on most RFC sites. This slows other processes on the DS.

Workaround: The work around is to kill the mcmonfreeway process, but then radar is not being monitored as designed. If you restart mcmonfreeway it causes an icpReset to be run which will cause some loss of radar product data.

! **Problem:** The hmMonitorServer exhibits symptoms of a memory leak(s). (DR 5541)
Raw data collected across the 4.2.6 sites indicate possible memory leaks in the hmMonitor server.

Workaround: None.

! **Problem:** CollDBDecoder crashes and reports traceback. (DR 5554)
The collective decoder is occasionally crashing and reporting a traceback on some products. So far, it is only on Alaska TAF products, and other versions of the problematic products have been stored successfully. The two products do far have been ANCTAFAKN (FTAK31 PANC) at 04:13 05/23 and FAITAFASC (FTAK31 PAFA). The decoder immediately restarts, and it does not seem like data has been lost so far.

Workaround: None. The CollDBDecoder will start up again on its own.

! **Problem**: DataController logs stop, but do not restart. (DR 5742)
Some of the data controller logs will terminate normally around 0Z, but will not restart a new log for the new day. The processes are up and running, but new logs are not created.

Workaround: Stopping and restarting ingest will start the logs again.

! **Problem:** monitorFreeway starts an icpReset even when a simpact has turned off and icpReset hangs. (DR 5895)
When turning off the simpact an icpReset process hung on ds1 and took up around 90% of the CPU according to top. It seems that the freeway monitor (as it should) ran icpReset but since the simpact was down icpReset just hung even when the simpact was restarted. The problem was that untill the icpReset process was killed no data was ingested from the board where icpReset had hung.

Workaround: Restart the simpact and kill the icpReset process. A new one will start.

! **Problem:** Creating Short Term Forecast in Warngen creates traceback in log. (DR 5955)
When creating a Short Term Forecast in Warngen, when the user selects Create Text, a traceback is logged in the warnGenWish log on the workstation.

Workaround: None. There appears to be no operational impact. The product still pops up on the text workstation, and is successfully sent to WWA.

! **Problem:** Certain Warngen products produce PROBLEM message in warnGenWish log. (DR 5956)
When Create Text is selected on certain products in WarnGen, the following PROBLEM message appears in the warnGenWish log:
warnGenWish 16826 963596313.341968 17:38:33.341 PROBLEM: sendProduct(): GetCharstcsList() failed with 100 !
The products that this occurs with are: Blowing Dust Advisory, Blowing Snow Advisory, Coastal Flood Statement and Watch, Frost Advisory, Hurricane Local Statement, Severe Weather Statement, Snow/Blowing Snow Advisory, Special Weather Statement (Zones), and Urban/Small Stream Advisory.

Workaround: None. There appears to be no operational impact. The products still pop up on the text workstation, and are still forwarded to WWA.

! **Problem:** The /data/logs directory fills up on the DS. (DR 6094)
The /data/logs directory on the data server routinely runs in the 90% range and now will reach 100% unless old logs are removed. Currently, the acqserver log alone is about 70-80 MB per day, which is almost 20% of the partition for each day of logs that is stored. Other logs are large as well, but this is the largest.

Workaround: The workaround is simply to remove old log files. The NCF monitors the size of /data/logs at each site.

5.14 Text Alarms/Warnings

Refer to User's Manual Section 4.2.6

! **Problem:** Cannot tell workstation/site default entries from editable entries via the user interface. (DR 882)
The System Manager may add workstation/site default alarm/alert products to the textAlarmAlertProducts.txt file. By design, they can not be deleted or changed via the user interface. However, there is no visual way for the user to know that default entries exist in the Text Alarm/Alert Products list.

Workaround: None. Look at the textAlarm/AlertProducts.txt file to see the default entries.

! **Problem:** Text - alarm product list. (DR 2644)

Alarmed products are removed from the alarm list but continued to alarm, even when a new list was created.

Workaround: Try clicking twice on “Save and Exit”, or clicking on “Product List” after “Save and Exit”. However, one more alarm may still be received for the deleted product.

! **Problem:** Alarm/Alert sometimes slow to respond when Update Obs is toggled on. (DR 5127)
Alarm/Alert bell appeared but did not flash or beep when update obs was toggled on. I clicked on bell and current alarm queue window came up grayed out. If it was caught quickly enough, the alarm/alert messages would show up after a short delay. The longer the bell stays up unattended to, the longer it takes for messages to show up in the window. If the update obs button is toggled off the products instantly show up in the current alarm queue window.

Workaround: The problem seems to be infrequent but once it occurs it continues to be a persistent problem on that xt. If this problem is found, minimize the window in which you have the "update obs" button turned on. Then the alarm/alert will not freeze up.

! **Problem:** Request/Reply process sometimes hangs. (DR 5234)
MhsRequestServer occasionally hangs. The problem is noticeable when the workstation log shows the request as sent, but no entries appear in the MhsRequestServer log on the primary data server. This problem cannot be re-created at will, and rarely occurs.

Workaround: The workaround is as root on the ds, kill the process (killProc MhsRequestServer, then kill MHS_REQ_SVR <pid>) and restart it (MhsRequestServer).

5.15 UNIX and Informix (dbaccess) Commands

! **Problem:** The textdb -l NNN command fails to convert all products to largetext. (DR 4705)
If a user issues a textdb -l NNN command to convert a product to largetext, it may report back that the product is already in largetext if a single product or group of products is already largetext in the database.

Workaround: The following commands will change products to largetext:

```
dbaccess <<!
update textProductInfo
set largeProduct=1
where ccid=”CCC” and nnnid=”NNN”
```

! **Problem:** Textdb -v command was not fully successful increasing from 84 to 144 products. (DR 5280)

MFR used textdb -v to increase the number of versions of PDXMTRMFR that they stored from 84 to 144. The result was that the number of versions displayable was 144, but only 84 of those were current; the other 60 were old and never updated.

Workaround: The resolution was to run a procedure in Section 16.11.4 of the SMM for freeing up data space, which involved deleting the PDXMTRMFR row from the informix.stdtextproducts table in dbaccess. After they did this, all 144 versions updated.

! **Problem:** There is a bug in the dbload utility causing loadtext.sql to fail. (DR 5504)
There is a bug in the 7.30 UC2 version of dbload. This bug causes the loadtext.sql script to fail to reload the fxatext stdtextproducts table. As a result, the data are lost and the nodedistance table is not loaded. This bug is supposed to be fixed in version 7.30 UC3 of Informix. As a result of this bug, the database support scripts will not work completely.

Workaround: The workaround is to do an dbexport and a dbimport of the fxatext database. In order for this to work, the fxatext.sql file created during the export will need to be modified to put the tables in the correct database space.

5.16 Wide Area Network (WAN) Communication/Message Handling

! **Problem:** The Message Handling Software cannot handle a four letter site ID. (DR 996)
The GUI for MHS does not allow longer than three letter addresses. The MTA ID is set based on the SITE_IDENTIFIER. This will cause a problem for the textworkstation because it will not recognize a four or more letter MTA ID as valid.

Workaround: There are few sites with four letter identifiers. For these sites, use the appropriate three letter identification for message handling found in afos2awips.txt and awipsSites.txt.

! **Problem:** Requests are not queued when the MhsRequestServer is down. (DR 3820)
Requests that are made through the Request/Reply function when the MhsRequestServer is down will not be acknowledged by the MhsRequestServer and will be lost.

Workaround: None.

! **Problem:** MHS - error deleting nack file. (DR 4090)
The MHSServer errors when trying to delete a nack file after notifying the user. The error message is as follows:

02:06:05.768 MhsWfoProduct.C PROBLEM: Error deleting nack file: /data/fxa/mhs/nackq/TBW3-16123.doc: No such file or directory.

The reason is the file is actually named TBW3-16123-TBW4.doc.

Workaround: This should not be a problem, as the MhsPurger will daily clean out this directory. The MHSServer handles ack file names correctly and is able to delete them.

! **Problem:** Messages created on the text workstation may not be sent to the WAN. (DR 4726)
The archive program runs once per hour. Sometimes when the MHS tries to send a product that has been created on the Text Workstation to the WAN, the product file is not in the directory where the MHS expects to find it (/data/fxa/textWSwork/<display>/saved). This is because the archive program runs once an hour, and moves all of the files in this directory to another directory (/data/fxa/textWSwork/<display>/archived) to save them for 30 days. Sometimes this happens between the time the Text Workstation writes the file to disk and the time the MHS software sends the file to the WAN.

Workaround: None. However, if you send the product again it should be successful.

! **Problem:** The 4 character site id for the San Juan WFO should be TJSJ, not TSJU. (DR 5449)
The San Juan WFO's three character site id is SJU, and their four character ID is TJSJ. The AWIPS software is assigning a site id of TSJU (or sometimes KSJU) to the products San Juan is distributing. Also, sites wanting to receive products from San Juan are looking for TSJU instead of TJSJ when identifying the products (for example, in radar product filtering).

Workaround: For 4.3, the San Juan site already has the information it needs for their site. The only changes that need to be made by other sites are as follows:

1. Make sure $FXA_HOME/data/wmoSiteInfo.txt contains TJSJ not TSJU for the San Juan site. This change might already have been done by the OSF and made available to the sites.

2. If a site wants to localize to San Juan, then they would need to modify $FXA_HOME/data/localizationDataSets/XXX/wmoSiteId.txt and change TSJU to TJSJ.

! **Problem:** awipsPriorities.txt contains incorrect mappings between product category and priority. (DR 5773)
The Text Workstation uses a file, awipsPriorities.txt, to assign a priority to each product that's sent to the WAN. Some of the priorities contained in the file are incorrect.

Workaround: None.

6.0 DATA

6.1 Grid Data

! **Problem:** A D2D pane (one IGC) can report no data inventory available in limited instances. (DR 5307)

If a user selects a grid product whose netCDF file is zero length, a red banner for no inventory is received. However, if data is then received, subsequent requests for data that is now available still results in a red banner.

Workaround: This only occurs in the IGC process (pane) where the no inventory banner was received. Use another pane or another D2D or WS to retrieve the data. This is expected to be a rare event; the chances of a user selecting a product when the netCDF file is zero length are slim.

6.2 International Data

! **Problem:** Russian Metars and Upper Air data are wanted. (DR 4943) **Refer to User's Manual Section 2.1.6**
Like other types of international data, Russian obs are not being processed in AWIPS. WMO headers such as SARA31 are making it all the way to the StdDBDecoder, but are not being stored with AWIPS PILs.

Workaround: None.

6.3 Metar Data

! **Problem:** Some locations in the MTR.goodness file may be slightly incorrect. (DR 5298)

Workaround: Users can edit the file on-site to make any needed corrections.

6.4 NCEP/RedBook Graphics

Refer to User's Manual Section 2.1.6

! **Problem:** The NCEP Graphics UpperAir Model Graphics product has errors. (DR 707)
Bad MRF MeanRH and AVN 850-500 Thickness data causes the UKMO, ECMWF, and S-blend 6-10 500 height products to be centered over Africa when they should appear over the pole.

Workaround: None. OM is working with NCEP on the Redbook Graphics issues.

! **Problem:** Some NCEP model products have different times on product dates, product legends, and green times. (DR 2479)
Some NCEP model products have product times (in the upper left corner), product legends, and green times that all differ from one another. These products are the following: From the Model Graphics cascading menu in the Upper Air menu, MRF

0-5 Wave 500 hgt, 120h UKMO 500 hgt, 120h ECMWF 500 hgt, and 6-10 day 500mb Height. From the Models cascading menu in the NCEP Graphics section of the Surface menu, NGM SLC Moist Conv.

Workaround: None.

! **Problem:** RedBook storage log reporting (Invalid) for most products. (DR 4002)
The Redbook storage log reports (Invalid) for nearly all products it stores. For example:
00:04:15.476 DataCaptReceiver.C USE: ProdLen 40
00:04:15.521 RedbookStorage.C EVENT: NCF_ENTRY [1/1] = PNWA60KWBC19990321_235915.303
00:04:15.591 RedbookStorage.C EVENT: NCF_STORE 5103 Mar 21 99 23:55:00 GMT 0:00 (Invalid)

Workaround: None. This error does not prevent the product from being stored correctly.

! **Problem:** Redbook Graphic lightning product will have wrong time when no lightning strikes. (DR 4027)
Often when there are no lightning strikes, NCEP will send a graphic that says there are no lightning strikes. At these times, the product legend of the graphic will be five minutes off or worse from the time burned in on the graphic itself. Example, the legend in the bottom right will say 22:30Z, but the time in the upper left of the graphic will say 22:25Z. When there are lightning strikes, the time stamps will be the same.

Workaround: None.

! **Problem:** AWIPS Date Time Group and Cycle Times Problems (External) (DR 4142)
Several RedBook Graphics (RBGs) date time groups (DTG) on their product's WMO Header are not correct. The DTG time should be the cycle time (also called basis time) for the forecast or analysis. For example, a 12 hr forecast of a product with a valid time of 09/00Z will have a cycle of 081200 (08/12Z). The AWIPS CP assumes the product WMO header date time group (TTAAii CCCC DDHHMM) will always be the cycle time and uses this information to "time stamp" the product which is key to time matching the product with other data types. The WMO DTG is created at the product generation source point which is typically at NCEP/NCO. An inventory of RBGs with the DTG problem has been accomplished and forwarded to NCEP. The methodology for checking to see if the WMO header of the RBG is the cycle time is to compare the AFOS label valid time with the AWIPS valid time label. Another way is to "cat" the file and compare the AWIPS DTG on the RBG file name with what appears in the file dump resulting from the "cat".

Workaround: None.

6.5 Radar Data/Radar Mosaic

Refer to User's Manual Section 2.1.6

! **Problem:** Range rings cannot be displayed on the 1km Composite Reflectivity product (CZ). (DR 767)

Workaround: None.

! **Problem:** Problems mapping radials to Cartesian space. (DR 3559)
The PUP has a special firmware card that receives radar radials and maps them into Cartesian space. AWIPS uses software to map radials to Cartesian space. For performance reasons, the mapping software uses a fixed radial-to-Cartesian mapping space. This table contains 420 entries; in actuality, the radar data typically contain 400 radials. This means that there may be approximately 20 mapping table radials for which there generally aren't real radials from the radar data and the mapping algorithm uses a real radial twice. These radials show up on the AWIPS display as "double-sized." In the case of certain derived products that are reformulated by the radar back to 360 radials (such as the digital hybrid scan), these 360 radials are mapped to the 420 radial table and every 6th radial is double-sized for these products.

Workaround: None. The present display will give an error of about ½ a degree in azimuth for some radials. Other radials will be double in width. This may result in algorithmic displays of TVS being slightly different than the cell centroids. This should not have an operational impact, but the user should be aware of it.

! **Problem:** 3hr precip radar product is stored too often to AWIPS. (DR 4297)
The radar produces the product only once per hour. Since AWIPS stores it every volume scan, there are multiple versions of the same product in the database. Because of this, there is difficulty in: (1) Making a meaningful loop of 3hr precip data; (2) Accessing products that are more than 3 or 4 hours old (There are too many repeat products; if the product would only come in once per hour, they'd be able to access more unique products, further into the past).

Workaround: Time-match this product to a METAR plot. That makes the data loop more meaningful, but you still can't view many hours worth of data.

! **Problem:** The radar product Digital Product Array (DPA) is not being displayed correctly on D2D. (DR 5032)
Because it was displaying correctly, the DPA menu choice was removed from the derived cascading menu under the radar menu.

Workaround: The DPA radar product can be displayed through HydroView by selecting Display and choosing the Areal Data page

6.6 Site Specific Data

! **Problem:** GOES-8 images not registered properly for TAR. (DR 1226) **Refer to User's Manual Section 2.1.6**
Satellite images displayed on the Regional scale are offset by 10 miles from the map grid.

Workaround: A correction factor is in the AWIPS software, minimizing these gridding errors. With the 4.2.GINI release, the NESDIS images will be properly registered (less than 3 miles).

! **Problem:** WarnGen is not working for long-fuse warnings at PHI. (DR 1458) **Refer to User's Manual Section 5.3**
PHI CWA currently does not include counties when long-fuse warnings are issued.

Workaround: When necessary, edit the text manually.

! **Problem:** For RNK, some WarnGen areas are wrong. (DR 3591) **Refer to User's Manual Section 5.3**
For some WarnGen warnings, the affected areas are inconsistent and sometimes wrong. For example, there seem to be several independent cities in southern VA not included in the list of affected areas. Also, a FFW that included Henry County also listed Martinsville, a city in Henry County, as Martinsville County and included the city of Martinsville as within Martinsville County.

Workaround: Correct any warnings generated by manually editing them.

7.0 AWIPS VERIFICATION PROGRAM (AVP)

Refer to User's Manual Section 8.4

7.1 AFOS/AWIPS MOS Differences

! There will be occasional, slight differences (± one unit) in the non-categorical MOS data values assembled for AWIPS verification, compared to the values in the AFOS VERIFY data set. This is because the source of the NGM MOS data in AWIPS is the BUFR MOS product, whose units are SI (Kelvins, m/s, etc.), while the source of NGM MOS data in AFOS is the FWC text message, whose units are the native English units of the MOS data. The units conversion, rounding, truncation, and packing of the native MOS into SI units for the BUFR MOS message, and the subsequent units conversion of the BUFR MOS data back to English units for AWIPS verification result in unrecoverable rounding and conversion differences as compared to the FWC values. The differences are minor and random: one degree Fahrenheit or one knot higher or lower, or less frequently, rounded wind direction (nearest 10 degrees) higher or lower.

This should not be misleading to the forecaster in preparation of local forecasts, since the NGM MOS guidance from which the ICWF can be initialized (if MOS initialization is selected), and upon which LAMP is based, is the NGM BUFR MOS data. However, in AWIPS, there is not yet any convenient mechanism for viewing the decoded NGM BUFR MOS data as a text product similar to the FWC.

7.2 AFOS-to-AWIPS Verification Transition

! Guidelines on the steps to transition from AFOS to AWIPS verification have been distributed to all WFOs. Contact your WFO or Regional AWIPS Focal Point for a copy.

7.3 "Editable" Observations in the Verification Matrix Editor

! Observations in the Verification Matrix Editor are set to either editable or non-editable status, depending on the difference between their valid time and the time when the editor was launched. Normally, verification observations are processed twice a day (i.e., every 12 hours) and become editable at some time after their valid time. This time difference between the valid time of the observation and when the editor allows the observation to be edited is controlled by the "OFFSET" parameter, found in the ***xver.conf*** file.

As delivered, OFFSET is set to 12 hours, which is good for many variables whose projections relative to the forecast cycle are in 12-h increments, such as 12-h Snow Amount and Daytime Maximum Temperature. Other observations are valid at times such as 15h, 18h, or 21h from the cycle initial time. Thus, with OFFSET set to 12 hours, the editor will allow these observations to be highlighted and modified before they have actually been processed and entered into the database. When the user attempts to save the modified data in such a case, an error dialog "**VerScreen::write(): save failed, status = 2011**" will occur, and the data will not be saved. This is because the editor is trying to update a data value for a row in the database that does not yet exist.

The workaround is to: (1) Cancel the changes and come back later to edit the data value, or (2) if identifiable, set the offending value(s) back to MSNG (missing) and try to save the other modified data (if any) again. No data will be lost or corrupted in this situation. The worst that can happen is that the user will be unable to save other valid changes that were made at this time.

Alternatively, if the "OFFSET" parameter is changed to 21 (hours) in the ***xver.conf*** file, that should be sufficiently large to prevent all unprocessed observations from ever being selectable in the first place. The drawback is that the user must now wait an additional 9 hours before being able to edit other already-processed observation fields.

7.4 Inadvertent Error Messages and Stack Trace

In release 4.3, the error log file "Forecast_obs_dvr_hhmmss.pppp" will routinely record the following error in each cron-driven run of the verification processes (and, in rare cases, in a make-up run manually initiated by opening the verification matrix editor):

ERROR, severity level MAJOR,
in function/subroutine "find_cycle_id":

The CYCLE_ID for *[WFO]* does not exist.

followed by a multi-line traceBack listing of the supposed error, normally followed by the message:

***hh:mm:ss.fff* run_aev_program.C EVENT:**
Launching program "aev_cycle_driver" for the *YYYY:MM:DD:HH* cycle.

where the italicized portions of the above samples vary by WFO ID or by date-time of the forecast cycle or run time.

This very-scary-looking error output is an artifact of the software logic in combination with the 4.3 system-wide error logging preference settings, and does not indicate a true error or problem at this stage of the AVP forecast cycle processing unless it is immediately followed by a ***fatal error*** indication and the message:

Aborting cron job

The routine error is recording the fact that a cycle_id value (used by the Informix verification database) has not been found for the current forecast cycle, which is normal, since any new cycle's cycle_id will not yet have been initiated.

7.5 "Local" Stations in Verification

! It is possible to automatically collect Public forecast elements for verification for stations that are not METAR or SCD observation stations, if these stations are set up in the ICWF as CCF forecast sites. Note that all aviation forecast data elements (taken from decoded TAFs), MOS forecasts, and observations will be MSNG (missing) in the verification database for such stations. Some amount of local software development would be required to get local observations (mesonet, co-op, etc.) processed and written into the proper slots in place of the missing values in the verification database.

An entry for the local station must be made in nationally-configured tables in the verification database (See New ASOS Sites topic, above) in order that the station can be added to the

verification station set-up. A mechanism has been provided for a user to do this, but the WFO should contact the Techniques Development Laboratory (TDL) at NWS Headquarters for instructions and guidance before attempting to set up a local station for verification. This is so that table entries in the database can be coordinated in order to prevent any conflicts with future national updates to the table. As an advantage to the WFO, TDL would then be able to provide any approved software that might have been developed to support automation of local verification observation processing.

SITES MUST NOT ADD STATIONS WHOSE DATA ARE RECEIVED OVER NATIONAL NETWORKS TO THE LOCAL STATIONS TABLE.

7.6 New Automated Surface Observing System (ASOS) sites

! The only stations which can be entered into the set-up for AWIPS verification are those included in a master station table in the verification database. The AWIPS Build 4.2 table contains the list of all known METAR and SCD reporting sites in the U.S., Canada, and Mexico as of late 1998. The METAR and SCD station entries in the table are a nationally-configured data set, and additions to this table are not allowed locally (see caveat under Local Stations, below). Therefore, stations which recently have been commissioned, or whose call letters have changed since the table was last updated, will not be able to be configured for verification until national configuration updates are made. If it is critical that a WFO should verify a known METAR station not found under the 4.2 baseline data set, contact the National AWIPS Data Sets focal point, Fran Curnow, at NWSHQ for guidance (see 11/3/99 awipsinfo posting by Richard Thigpen).

7.7 Practical Limits on Coded Cities Forecast (CCF) and Manually Entered Forecast (MEF) Cutoff Times

! The User's Guide and the HELP information for the CCF/MEF Cutoff Time Setup indicate no limitations on the entered times, except that the values must range between 00:00z and 23:30z. The documentation mentions that if the cutoff time for the 12Z cycle is before 12:00z (for example, 11:00z), then the cutoff time limitation is taken as that time on the following day (i.e., 11:00z tomorrow). From the standpoint of how the ICWF responds when the CCF is created, this is a true statement--as long as the cutoff time has not passed, upon creation of the CCF the ICWF will copy the station matrix data over to the verification database without notification to the user that a time limit has passed.

However, the AWIPS verification program cron schedule is such that the 00Z forecast cycle data are actually processed at 11:30Z on the same day, and the 12Z forecast cycle data are processed at 23:30Z on the same day, regardless of whether the cycle's data from the ICWF have been copied over yet. If the station matrix data from ICWF (copied over for verification when the CCF is created) for a given cycle are not in the verification database before these respective times, then the local public forecast data for that cycle are written to the

verification database as MISSING, and no attempt is made to reprocess the cycle's data at a later time. Therefore, from a practical standpoint, the latest CCF/MEF cutoff times that should be used are 11:30Z for the 00Z cycle, and 23:30Z for the 12Z cycle.

7.8 Verification Data Archive Files

! The Informix database tables which hold: (1) AWIPS verification data, (2) decoded TAFs, and (3) decoded METARs, are routinely unloaded from Informix to compressed unix ascii files for archive purposes, and to prevent the tables in Informix from consuming the disk storage. One file per unloaded table is produced, and each file holds one month of data. Verification data from two months prior to the current month are unloaded at the beginning of each month. Decoded TAF and METAR data older than seven days are unloaded four times per month. The data are deleted from Informix after unloading to the archive files.

The archive files are located on the data server in the directory:

/data/fxa/verification/archive

in files named for their data source table, and the year and month of the data within the file. The file names beginning with "aev" are the verification data archive. The file names beginning with "taf" hold the decoded TAF archives. The filenames beginning with "fss" (i.e., fixed surface station) hold the decoded METAR and SCD archive data, for all stations set up in either or both the verification and daily climate formatter programs. Beginning in AWIPS Build 4.3, only the METAR and SCD data for stations in the verification setup list will be archived.

There is no automated procedure for moving these archive files from the disk to permanent, removable archive media. While the individual files are relatively small in their compressed form, the total storage required for these files will grow to a significant size over a period of months or years, depending on the number of station used in climate and verification. The "aev" archive files are the only permanent archive of verification data at the WFO, they will support future applications for computation of seasonal and annual verification statistics, and they should be saved at the WFO in some form. The "taf" and "fss" archive files are meant to support a future enhanced aviation verification program. Once enhanced aviation verification is developed and delivered, data from the archive set going back to day 1 of the setup of the AWIPS verification program will, if saved, be able to be re-loaded and processed for historical scores and statistics.

It is suggested that, on an annual or semi-annual basis, the archive files for data older than one month ago should be written to a permanent backup tape reserved for verification data, and that a second copy be made of the tape for safety. A portable, external DAT drive is available for this purpose, and the System Manager should be able to accomplish this task. Backing up to the OMNIBACK tape drive is not suitable for this purpose, since these tapes are

recycled and overwritten on a regular basis. The data can then be safely deleted from the disk to free up space. **The archive files for the immediate previous month should remain on disk, since additional data may still need to be unloaded to these files**.

7.9 Whiteout Situation in Verification Matrix Editor

! In normal use, the "active" editing fields in the verification matrix editor consist of white letters on a red-highlighted background. Users have occasionally encountered a problem where the active fields in the verification matrix editor show up as white letters on a white background, making it impossible to enter or edit the field values. This situation occurs when the Netscape browser application is open on the text workstation where the user is attempting to edit verification data. Netscape grabs all available free colors on the text workstation, resulting in an X-window color conflict with the verification matrix editor, even if Netscape is minimized at the time. To resolve the conflict, close the Netscape application temporarily while editing verification data in the matrix editor. It is not necessary to log out or reboot the workstation to resolve the problem.

8.0 OCONUS

8.1 AWIPS Verification Program (AVP)

Refer to User's Manual Section 8.4

! **Problem:** Verification is not in the text workstation menu for OCONUS sites. (DR 4916)

Workaround: None. Verification will be added in a future release.

8.2 Decoders

! **Problem:** The Metardecoder fails to process the entire collective if the first report is AGGH ID

Workaround: None

8.3 Hydrology Ingest

Refer to User's Manual Section 12.1.2

! **Problem:** Alaska Hydrology Data not Ingested. (DR 4534)
A large portion of Alaska's hydrology (SHEF) data has a header of SRUS32.KWOH. This is not in the baseline /awips/fxa/data/acq_patterns.txt file. The Alaska sites have it in their acq_patterns.txt file, but this file will be replaced during the installs.

Workaround: Save off your site's /awips/fxa/data/acq_patterns.txt file prior to installation. Replace the saved file after install is complete.

8.4 Install

! **Problem:** OCONUS sites are having their /awips/adapt/ifps/crontab directory removed from sites that issue TSFP. (DR 4792)
At OCONUS sites, the /awips/adapt/ifps/crontab directory is removed as part of the clean up. The problem is that for sites that issue TSFP, which is run via cron, will never have these crons loaded into service guard because the files were deleted.

Workaround: None.

8.5 Map Features/Legends

Refer to User's Manual Section 2.1.6

! **Problem:** State/County Boundaries Legend Appears Twice at Alaska Sites. (DR 4524)
If State/County is selected from the Maps menu at State scale, a second State/County map legend appears in addition to the default State/County map feature. The two map features are almost identical and can be distinguished only by zooming in very close. This was observed at AFG, AFC, and ACR. This does not seem to cause any problems.

Workaround: Remove manually.

! **Problem**: Incorrect Map Backgrounds for Alaska Sites. (DR 4530)
For ACR, the CWA IDs are not present for AK sites at any scale, but are present for CONUS sites if you go to a large enough scale. For AFC, AFG, and VRH, CWA IDs are present for AK, but are not present for CONUS sites.

Workaround: None.

8.6 Mesoscale Surface Analysis System (MSAS)

Refer to User's Manual Section 2.1.6

! **Problem:** MSAS not displayable on map scales. (DR 4485)
MSAS data is not applicable to OCONUS sites since it is turned off and is not displayable on most of the smaller scales. MSAS does appear as a menu choice on the D2D.

Workaround: None.

8.7 NOAA Weather Wire Service (NWWS)

! **Problem:** transferNWWS.pl script places incorrect WMO header on OCONUS sites. (DR 5445)
The transferNWWS.pl script does not place the correct WMO header for sites whose 4-character WMO ID begins with a letter other than "K". For example, Anchorage is PANC. The script creates a header with KANC. The 4-character ID can be found in the afos2awips.txt file for the official user product.

Workaround: None.

8.8 Product Maker

Refer to User's Manual Section 3.2

! **Problem:** Guam Product Maker sometimes distorts satellite images. (DR 2263)
Often in the Product Maker at Guam, if you load a satellite image, you will get a distorted image consisting mainly of lines across the screen. The times that you do get a satellite image, if you load it for any scale below hemisphere, you get back an image that doesn't fit to the scale you have chosen. It appears as though the Product Maker uses the hemisphere scale image for all other scales. At any of the scales, if you try to zoom in, it doesn't adjust the image. In Hawaii, all satellite images that you try to display from the Product Maker are distorted in the manner described in the first sentence above.

Workaround: None.

! **Problem:** Longitude is not available far enough to the west in Product Maker (DR 2537)
Choices in the Longitude menu of the Product Maker only go west to 180W. Longitudes beyond this are not available selections.

Workaround: None. Restrict longitude selections in the Product Maker to 120W or less. This is now a problem mainly for Guam and Hawaii.

! **Problem:** Can not load Satellite Images from Product Maker for Guam. (DR 4459)
The user can not load any satellite images from Product Maker for Guam at any scale. When you try to load the image the following tcl error is displayed:
Error:can't read "keyname": no such variable.

Workaround: None.

8.9 Radar

! **Problem:** SCAN not working at OCONUS sites. (DR 4400) **Refer to User's Manual Section 7.5**
Attempting to bring up the SCAN depictable, you get multiple 'no inventory' messages. The /data/fxa/radar//tstorm directory, and the CellDataFiles and MsgFiles subdirectories were empty. The logs for the tStorm process on the 'as' however show no signs of any problems.

Workaround: AWIPS OCONUS sites do not ingest cloud-to-ground lightning data, which SCAN uses to determine severe weather potential for defined local sites. Therefore, if for whatever reason the 4km Composite Reflectivity radar product is not being received by AWIPS, then SCAN will not be producing ANY products for the AWIPS OCONUS WFOs. There should be no inventories for the Storm Cell ID Display or the Storm Site Threat depictables under the SCAN menu. Please REMEMBER that the SCAN process (tStormDecoder) is triggered by the receipt of the 4km Composite Reflectivity radar product.

! **Problem:** Radar Alert Area Editor at San Juan does not save at scales above sub-regional. (DR 5034) **Refer to User's Manual Section 7.1**
Two most northern lines of active alert area boxes are outside of sub-regional area, but inside the regional area. These two lines can not be saved by the Alert application.

Workaround: None. This should have little impact because the area not covered is at the northern edge of the radar area over open water.

8.10 Terminal Aerodrome Forecast (TAF) Editor

! **Problem:** The TAF Editor is not accessible from the root pull down menu at OCONUS sites. (DR 5483)

Workaround: None.

8.11 Volume Browser

Refer to User's Manual Section 3.1

! **Problem**: Profiler option not available on Volume Browser on ACR. (DR 4536)
Profiler data is not an option at any scale in the Volume Browser. It is available through the Upper Air menu. This DR is the open piece of DR 4475, which was closed when profiler data was made available in the UA menu.

Workaround: None.

8.12 Warning Generation (WarnGen)

Refer to User's Manual Section 5.3

! **Problem:** SJU WarnGen formatting errors. (DR 3262)
SJU's WarnGen has formatting errors for both bullet-formatted and non-bullet warnings. A Severe TS warning has: "Y OF SANTA ISABEL", possibly referring to the city of Santa Isabel since the county is referenced separately at the end of the message. Not all of the bullet-format warnings were tested to see if it's happening on all of them, but the error was repeatable using a slightly different area that still included Santa Isabel. For a dense fog warning, counties with 2-word names (e.g., Sabana Grande and Las Marias) seem to force a line feed between the 2 words regardless of where the words appear in the line. "Juana Diaz" loses its "z", there's a "V" (nothing else). Example of forced new lines:
"IN PUERTO RICO
LAJAS, SAN GERMAN, SABANA
GRANDE, YUACO, GUAYANILLA, LARES, LAS
MARIAS, MARICAO, ADJUNTAS, JAYUYA, CIALES, MOROVIS, CO"

Workaround: Review and edit (as needed) all WarnGen products for issuing.

! **Problem:** SJU WarnGen text uses VST instead of AST. (DR 5163)
The time zone information in the WarnGen text (both in the header and the body of the warning) is VST instead of AST. This occurs for all warning products.

Workaround: Change VST to AST while editing the text.